B6,B22

Service Manual

TV/DVD Combination PV-20DF62 / PV-27DF62 / PV-27DF62-K



SPECIFICATIONS

ITEM		SPECIFICATION		2	ITEM		SPECIFICATION			
GENERAL	Power	Source: 120 V AC±12 V AC, 60 Hz±3 Hz		0	DISPLAY	Picture	20 inch diagonal pure flat Picture Tube) – - 0	
	rowei	Consumption: Approx. 113 W (Power on), Approx. 3.5 W (Power off) Consumption: Approx. 146 W (Power on), Approx. 3.5 W (Power off)			Tube	27 inch diagonal pure flat Picture Tube				
	Television System	EIA Standard (525 lines, 60 fields) NTSC Color Signal	011) -		FM Radio	Band Range	87.5 MHz-108.1 MHz	ļ	0	
	Operating Condition	5 °C-35 °C (41 °F-95 °F) (Temperature) 10 %-75 % (Humidity)	0				(1) DVD-VIDEO disc: 12 cm (5 mcn) single-sided, single-layer 12 cm (5 inch) ideotile-sided, double-layer 12 cm (5 inch) double-sided, double-layer (one layer per side) 8 cm (3 inch) single-sided, single-layer 8 cm (3 inch) single-sided, double-layer 8 cm (3 inch) single-sided, double-layer (cm layer per side) (2) Compact disc(CD-DA, VIDEO CD):			
	Dimension (W x H x D)	604 mm x 523 mm x 503 mm (23-13/16 inch x 20-9/16 inch x 19-13/16 inch 760 mm x 651 mm x 503 mm (29-15/16 inch x25-5/8 inch x 19-13/16 inch)) -			Discs Played			000	
	Weight	28 kg (61.6 lbs.) 47 kg (103.4 lbs.)	0	- 0					0	
	Broadcast Channels	VHF 2~13, UHF 14~69	0		DVD		12 cm (5 inch) disc, 8 cm (3 inch) disc		0	
TUNER	Midband A through I (14-22) Superband J through W (23-36) CABLE Hyperband AA-EEE (37-64)		00	0		Digital Audio Output	Optical digital output: Optical connector		0	
	Special CABL	Lówband A-5-A-1 (95-99) Special CABLE channel 5A (01) Ultraband 65-94, 100-125				Pickup	Wave length: 655 nm (DVD), 790nm (Video CD/CD) Laser power: CLASS II		0	

1. PV-20DF62

2. PV-27DF62/PV-27DF62-K

Weight and dimensions shown are approximate.

Designs and specifications are subject to change without notice.

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⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

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1. SAFETY PRECAUTIONS

1.1. GENERAL GUIDELINES

1. IMPORTANT SAFETY NOTICE

There are special components used in this equipment which are important for safety. These parts are marked by △ in the Schematic Diagrams, Circuit Board Layout, Exploded Views and Replacement Parts List. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent X-RADIATION, shock, fire, or other hazards. Do not modify the original design without permission of manufacturer.

- 2. An Isolation Transformer should always be used during the servicing of Combination TV/DVD whose chassis is not isolated from the AC power line. Use a transformer of adequate power rating as this protects the technician from accidents resulting in personal injury from electrical shocks. It will also protect Combination TV/DVD from being damaged by accidental shorting that may occur during servicing.
- 3. When servicing, observe the original lead dress, especially the lead dress in the high voltage circuits. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
- 4. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers, shield, and isolation R-C combinations are properly installed.
- 5. Before turning the receiver on, measure the resistance between B + line and chassis ground. Connect (-) side of an ohmmeter to the

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B+ lines, and (+) side to chassis ground. Each line should have
  more resistance than specified, as follows:
  (For model with 20 inch CRT)
B+ Line
  Minimum Resistance
115 V
  1 k ♀ (Cold chassis ground)
28 V
  220 V
  1 k ♀ (Cold chassis ground)
  (For model with 27 inch CRT)
B+ Line
  Minimum Resistance
140 V
  1 k ♀ (Cold chassis ground)
  180 
☐ (Cold chassis ground)
220 V
  1 k \( \text{(Cold chassis ground)} \)
```

- 6. When the TV set is not used for a long period of time, unplug the power cord from the AC outlet.
- 7. Potentials, as high as 34.5 kV are present when this TV set is in operation. Operation of the TV set without the rear cover involves the danger of a shock hazard from the TV set power supply. Servicing should not be attempted by anyone who is not thoroughly familiar with the precautions necessary when working on high voltage equipment. Always discharge the anode of the picture tube to the CRT ground of receiver before handling the tube.
- 8. After servicing make the following leakage current checks to prevent the customer from being exposed to shock hazards.

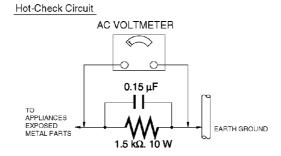
1.2. LEAKAGE CURRENT COLD CHECK

- 1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
- 2. For physically operated power switches, turn power on. Otherwise skip step 2.
- 3. Measure the resistance value, with an ohmmeter, between the jumpered AC plug and each exposed metallic cabinet part on the receiver, such as screwheads, connectors, etc. When the exposed metallic part has a return path to the chassis, the reading should be between 1 M Ω and 12 M Ω . When the exposed metal does not have a return path to the chassis, the reading must be infinity.

1.3. LEAKAGE CURRENT HOT CHECK

- 1. Plug the AC cord directly into the AC outlet.

 Do not use a isolation transformer for this check.
- 2. Connect a 1.5 k ♀, 10 W resistor, in parallel with a 0.15 # F capacitor, between each exposed metallic part on the set and a good earth ground, as shown in Figure 1.
- 3. Use an AC voltmeter, with 1 k Ω /V or more sensitivity, to measure the potential across the resistor.
- 4. Check each exposed metallic part, and measure the voltage at each point.
- 5. Reverse the AC plug in the AC outlet and repeat each of the above measurements.
- 6. The potential at any point should not exceed 0.75 V RMS. A leakage current tester (Simpson Model 229 equivalent) may be used to make the hot checks. Leakage current must not exceed 1/2 mA. In case a measurement is outside of the limits specified, there is a possibility of shock hazard, and the receiver should be repaired and rechecked before it is returned to the customer.



2. X-RADIATION

WARNING:

- 1. The potential source of X-Radiation in TV sets is the High Voltage section and the picture tube.
- 2. When using a picture tube test fixture for service, ensure that the fixture is capable of handling 34.5 kV without causing X-Radiation.

NOTE:

It is important to use an accurate periodically calibrated high voltage meter.

- 1. Reduce the brightness to minimum.
- 2. Set the SERVICE switch to SERVICE.
- 3. Measure the High Voltage. The meter reading should indicate 32.5 kV±2.0 kV.
 - If the meter indication is out of tolerance, immediate service and correction is required to prevent the possibility of premature component failure.
- 4. To prevent an X-Radiation possibly, it is essential to use the specified picture tube.

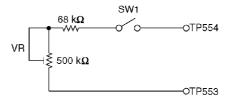
2.1. HORIZONTAL OSCILLATOR DISABLE CIRCUIT TEST

SERVICE WARNING:

The test must be made as a final check before set is returned to the customer. CONFIRMATION OF X-RAY MOVEMENT

- 1. Turn off TV set.
- 2. Connect the circuit below between TP553 and TP554 on the TV Main C.B.A.

Figure 2



- 3. Turn on SW1 and then turn on the set. Confirm that the picture is on the screen properly.
- 4. Confirm that the picture goes out of horizontal sync while getting down by varying VR.
- 5. If this does not occur, it means that X-ray protect circuit is not operating. Further confirmation and repair is required.

2.2. REPAIR PROCEDURES OF HORIZONTAL OSCILLATOR DISABLE CIRCUIT

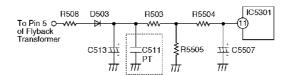
- 1. Connect a DC voltmeter between capacitor C513 (+) on the Main circuit board and chassis ground.
- 2. If approximately +21.5 V is not present at that point when 120 V AC is applied, find the cause. Check R503, R5505, C5507, C513 and D503.
- 3. Carefully check above specified parts and related circuits and parts. When the circuit is repaired, try the horizontal oscillator disable circuit test again.

2.3. CIRCUIT EXPLANATION

2.3.1. HORIZONTAL OSCILLATOR DISABLE CIRCUIT

The positive DC voltage, supplied from the D503 cathode for monitoring high voltage, is applied to the IC5301 Pin 11 through R503 and R5504. Under normal conditions, the voltage at IC5301 Pin 11 is less than approx. 3 V. If the high voltage at Flyback Transformer Pin 5 exceeds the specified voltage, the positive DC voltage which is supplied from the D503 cathode also increases. The increased voltage is applied to IC5301 Pin 11 through R503 and R5504. Due to the increased voltage at IC5301 Pin 11, the horizontal oscillator frequency increases, the picture goes out of horizontal sync, the beam current decreases and the picture become dark in order to keep X-radiation under specification.

Figure 3



2.4. LASER PRODUCT

CLASS I LASER PRODUCT

- This equipment is certified to comply with DHHS Rules 21 CFR Chapter 1, Subchapter J in effect as of date of manufacture. (Only for U.S.A.)

This equipment is classified as a Class I (Class 1) level LASER Product and there is no hazardous LASER radiation with the safety protection.

Caution:

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Never touch the internal parts in order to avoid EXPOSURE TO VISIBLE LASER RADIATION. Unplug the AC power cord to the equipment when opening the top cover.

When the power switch is On, do not place your eyes close to the front panel opening door or the other openings to look into the interior unit.

LASER Specification

Class I level A LASER Product (Class 1 level A LASER Product)

Wave Length:

647 - 677 nm (at DVD)

775 - 815 nm (at CD)

Laser Power:

No hazardous radiation is emitted with the safety protection.

2.5. PRECAUTION OF LASER DIODE

CAUTION:

This unit utilizes a class III a laser. Visible laser radiation is emitted from the optical pickup lens when the unit is turned on:

- 1. Do not look directly into the pickup lens.
- 2. Do not use optical instruments to look at the pickup lens.
- 3. Do not adjust the preset variable resistor on the optical pickup.
- 4. Do not disassemble the optical pickup unit.
- 5. If the optical pickup is replaced, use the manufactures specified replacement pickup only.
- 6. Use of control or adjustment or performance of procedures other than those specified herein may result in hazardous radiation exposure.

3. PREVENTION OF ELECTROSTATIC DISCHARGE (ESD) TO ELECTROSTATICALLY SENSITIVE (ES) DEVICES

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors are semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by electrostatic discharge (ESD).

- 1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any ESD on your body touching a known earth ground. Alternatively, obtain and wear a commercially available discharging ESD wrist strap, which should be removed for potential shock reasons prior to applying power to the unit under test.
- 2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
- 3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
- 4. Use only an anti-static solder removal device. Some solder removal devices not classified as "anti-static (ESD protected)" can generate electrical charge sufficient to damage ES devices.
- 5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
- 6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material).
- 7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

CAUTION:

Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity (ESD) sufficient to damage an ES device).

"NOTE to CATV system installer:

This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical."

4. OPERATION GUIDE

5. SERVICE NOTES (PLEASE READ)

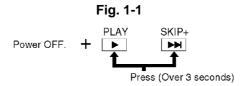
5.1. SERVICE NOTES

5.1.1. SIMPLIFIED FAULT FINDING DATA

Simplified Self-Diagnostic System facilitates finding the cause of the fault. Communication for l² C bus code will be displayed on TV screen.

The Simplified Fault finding data is stored in the Memory IC (IC6004). This data is cleared after it is displayed, and then the POWER button is pressed back on.

1. With power turned off, press PLAY and SKIP+ buttons on the unit together for over 3 seconds.



2. TV power comes on and the unit goes into service mode. Communication for I₂C bus code will be displayed.

Fig. 1-2

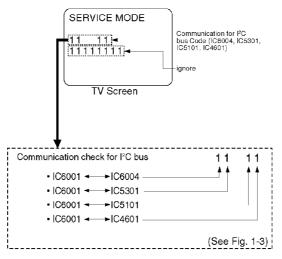
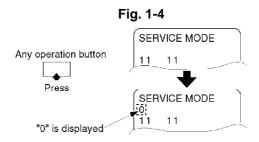


Fig. 1-3

(Communication check for I2C bus)

Explanation of Codes			Code No.				
Communication check for I²C bus (IC6001←→IC6004) NG OK	0						
Communication check for I²C bus (IC6001←→IC5301) NG OK		0					
Communication check for I²C bus (IC6001←→IC5101) NG OK					0		
Communication check for I²C bus (IC6001 ∢→ IC4601) ····· NG OK						0	

3. Press any operation button except for POWER, CH UP, CH DOWN, LIGHT or DSS CABLE buttons on either the unit, or the remote to detect that a key has been pressed. "0" will be displayed only when key is detected.



5.1.2. SELF-DIAGNOSTIC TEST FUNCTION FOR DVD

This unit has a Self-Diagnostic function which detects a problem or malfunction within the unit and displays its corresponding Error code on TV Screen.

Note:

If, after approx. 30 seconds, a unit set to DVD mode automatically switches to TV mode, there is likely a problem with the DVD Decoder C.B.A. (IC8000, IC8100, IC8200, etc.)

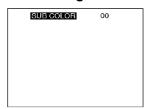
- 1. Insert a DVD disc into the DVD Unit.
- 2. Set the unit to DVD mode. Then, press STOP button to stop playback.

Note:

Do not let a DVD play during DVD Self-Diagnostic mode.

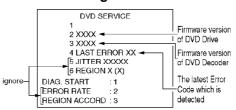
3. Press and hold STOP, SKIP+, and VOL- buttons of operation panel on the unit together for over 5 seconds with no cassette inserted. The adjustment overlay will appear on the TV screen.

Fig. 2-1



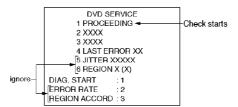
4. Press DISPLAY key on the remote control to enter DVD Self-Diagnostic mode.

Fig. 2-2



5. Press "1" key on the remote control. The DVD Self-Diagnostic Test function will start automatically.

Fig. 2-3



- 6. After a few minutes (approx. 1~5 minutes), the check results will appear on TV screen.
 - If no error is detected, "COMPLETED" will appear as shown in Fig. 2-4. Be sure to press Power OFF to end. Then, press Power ON again and remove a DVD from the DVD Unit.



- If some error is detected, 2 digit for Error Code will appear as shown in Fig. 2-5.

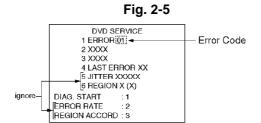


Fig. 2-6

Error Code

Error Code	Explanation of cause		
00	No Error		
10	Loading Error		
30	30 Ultra DMA (Direct Memory Access) CRC Error		
40	Spindle Motor Error		
50	Traverse Motor Error		
60	Servo Error		
70	Recovery Error		

5.1.3. HOW TO UPDATE THE FIRMWARE OF DVD

It is possible to update the firmware version of the DVD Drive and the DVD Decoder using each Firmware Disc for DVD Drive and DVD Decoder.

5.1.3.1. How to update the firmware of DVD:

- 1. Confirm the firmware version of DVD Drive. Refer to "SELF-DIAGNOSTIC TEST FUNCTION FOR DVD."
- 2. Set the unit to DVD mode.
- 3. Press OPEN/CLOSE button to open the tray. Then, place the Firmware Disc for DVD Drive in the tray.
- 4. Close the tray. Updating will begin automatically.
- 5. After approx. 1 minute, the tray will open automatically.

 Note:

If the tray has still not opened after 3 minutes or Error Indication appears, updating was unsuccessful. In this case, repeat above steps from step 1.

6. Remove the Firmware Disc from the tray. Then, disconnect the AC Plug. (The tray will not close.)

7. Connect the AC Plug and turn on the power. Then, reset all memory. Refer to "HOW TO RESET ALL COMBINATION TV/DVD MEMORY FUNCTIONS."

5.1.3.2. How to update the firmware of DVD Decoder:

- 1. Confirm the firmware version of DVD Decoder. Refer to "SELF-DIAGNOSTIC TEST FUNCTION FOR DVD."
- 2. Set the unit to DVD mode.
- 3. Press OPEN/CLOSE button to open the tray. Then, place the Firmware Disc for DVD Decoder in the tray.
- 4. Close the tray. Updating will begin automatically.
- 5. After approx. 1 minute, the tray will open automatically.

 Note:

If the tray has still not opened after 3 minutes or Error Indication appears, updating was unsuccessful. In this case, repeat above steps from step 1.

- 6. Remove the Firmware Disc from the tray. Then, disconnect the AC Plug. (The tray will not close.)
- 7. Connect the AC Plug and turn on the power. Then, reset all memory. Refer to "HOW TO RESET ALL COMBINATION TV/DVD MEMORY FUNCTIONS."

CAUTION:

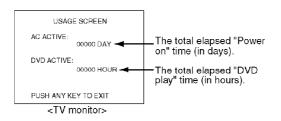
unit.

- 1. Do not unplug the AC Cord during updating.
- 2. Do not press any buttons during updating.

5.1.4. USAGE SCREEN MODE

Function displayed on the TV monitor:

- the total elapsed "Power on" time (in days)
- the total elapsed "DVD play" time (in hours).
- With power turned, press STOP button of operation panel on the unit and 7 key on the remote together.
 The USAGE SCREEN will be displayed on the TV Monitor of the



Note:

- 1. After replacing the DVD Unit, press ADD/DLT button on remote in this mode. Only Total elapsed time "DVD Play" time (in hours) will be cleared to 0.
- 2. To release from Usage Screen Mode, press any operation button or insert a cassette tape in this mode. The unit will return to normal operation mode.

5.1.5. GROUNDING FOR ELECTROSTATIC BREAKDOWN

Prevention

- Human body grounding
 Use the antistatic wrist strap to discharge the static electricity from your body.
- 2. Work table grounding
 Put a conductive material (sheet) or steel sheet on the area where
 the optical pickup is placed and ground the sheet.

Caution:

The static electricity of your clothes will not be grounded through the wrist strap. So take care not to let your clothes touch the optical pickup.

Fig. 4

Wrist strap
(Anti-static bracelet)

Plate of iron or other metal to conduct electricity

5.1.6. DVD DECODER C.B.A. REPLACEMENT NOTE

After replacing DVD Decoder C.B.A. or EEPROM IC (IC8001), confirm the Firmware version of DVD using Self-Diagnostic function. If the version is different than that indicated on the Firmware Disc, update it using the Firmware Disc. Refer to "HOW TO UPDATE THE FIRMWARE OF DVD."

5.1.7. METHOD FOR EJECTING THE DVD TRAY MANUALLY

- 1. Insert a Straightened Paper Clip or similar object into the Eject hole.
- 2. Press it gently, and then pull the Tray fully out.

Press = jec; hole
Straightened Paper Clip or similar object

5.1.8. SERVICE POSITION

5.1.8.1. Service Position

Service Position	Purpose		
Service Position (1)	Electrical adjustment		
Service Position (2)	TV Main C.B.A. check Tuner Main C.B.A. check Main C.B.A. check		
Service Position (3)	DVD Decoder C.B.A. check Electrical adjustment		

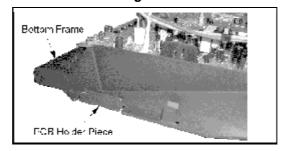
CAUTION:

HOT CIRCUIT (Primary circuit) exists on the TV Main C.B.A. and the Main C.B.A.

Use extreme care to prevent accidental shock when servicing. 5.1.8.1.1. Service Position (1)

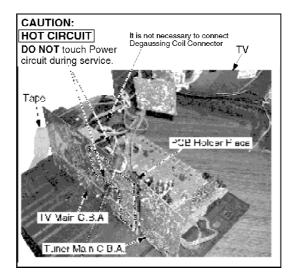
- 1. Remove the Rear Cover and the DVD Ass'y.
- 2. Remove the PCB Holder Piece from the Bottom Frame.

Fig. 6-1-1



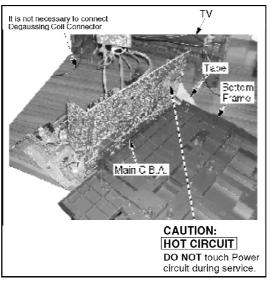
3. In order to stabilize the TV Main C.B.A. and the Tuner Main C.B.A., attach the PCB Holder Piece to the C.B.A.s.

Fig. 6-1-2



5.1.8.1.2. Service Position (2)

Fig. 6-2



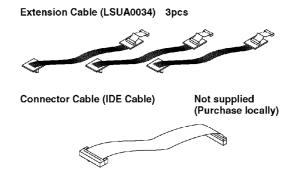
Note:

1. Place the tape between the Bottom Frame and the C.B.A.

5.1.8.1.3. Service Position (3)

In Service Position (3), the DVD Decoder C.B.A. with Extension Cable (LSUA0034) X3 and Connector Cable (IDE Cable) (Not supplied) can be performed.

Fig. 6-3-1



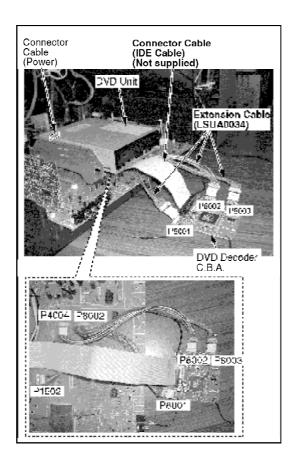
1. Remove the DVD Unit and the DVD Decoder C.B.A.

Note:

Remove the original Connector Cable (IDE) from the DVD Unit. (The original Connector Cable (IDE) is not used in this position.)

- 2. Connect the Connector Cable (Power) and the Connector Cable (IDE Cable) to the DVD Unit from the DVD Decoder C.B.A.
- 3. Connect the 3 Extension Cables as follows:
 - With Extension Cable (LSUA0034): P8001 on the DVD Decoder C.B.A. to P1502 on the Main C.B.A.
 - With Extension Cable (LSUA0034): P8002 on the DVD Decoder C.B.A. to P4004 on the Main C.B.A.
 - With Extension Cable (LSUA0034): P8003 on the DVD Decoder C.B.A. to P6002 on the Main C.B.A.
- 4. Place the DVD Unit and DVD Decoder C.B.A. as shown.

Fig. 6-3-2



5.1.9. HOT CIRCUIT

Primary circuit exists on the the TV Main C.B.A. and the Main C.B.A.

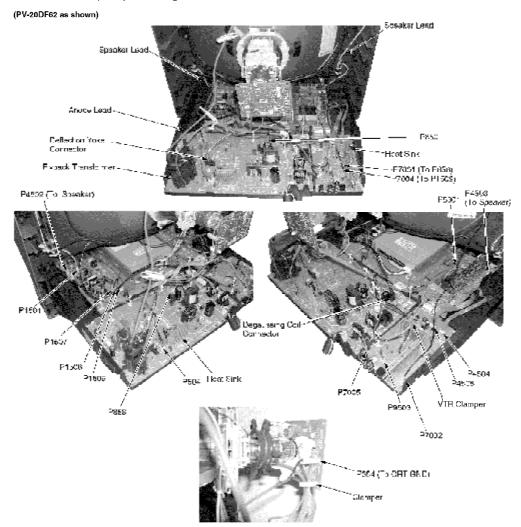
This circuit is identified as " HOT " on the C.B.A. and in the Service Manual. Use extreme care to prevent accidental shock when servicing.

5.1.10. WIRE AND LEAD POSITION DIAGRAM

After servicing, make sure that all wires, leads, and clampers are placed in their original position. It is important for the best operation of the unit

Note:

No lead wires or flat cables should touch any heating parts or the Heat Sink Plate. Use extreme care especially for followings.



5.1.11. HOW TO RESET ALL COMBINATION TV/DVD MEMORY FUNCTIONS

To reset (clear) the select language, channel auto set and set clock functions to their initial power on condition (power on), hold down the PLAY and SKIP- buttons of operation panel on the unit together for more than 5 seconds.

Power will shut off.

5.1.12. HOW TO CONFIRM AUTO CLOCK SET FEATURE

- 1. Connect an RF cable from the output of one unit to the input of the test unit.
- 2. Select corresponding RF channels.
- 3. Playback a recording of P.B.S. channel including clock set data and confirm this feature.

5.1.13. VARIABLE VOLTAGE ISOLATION TRANSFORMER

An Isolation Transformer should always be used during the servicing of Combination TV/DVD whose chassis is not isolated from the AC power line. Use a transformer of adequate power rating as this protects the technician from accidents resulting in personal injury from electrical shocks. It will also protect Combination TV/DVD from being damaged by accidental shorting that may occur during servicing.

Also, when troubleshooting the above type of Power Supply Circuit, a variable isolation transformer is required in order to increase the input voltage slowly.

5.1.14. SPECIAL NOTE

All integrated circuits and many other semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the "ELECTROSTATICALLY SENSITIVE (ES) DEVICES" section of this service manual.

5.1.15. MODEL NO. IDENTIFICATION MARK

Use Marks shown in the chart below to distinguish the different models included in this Service Manual.

MODEL	MARK
PV-20DF62	Α
PV-27DF62	В
PV-27DF62-K	С
Not Used	PT
	PV-20DF62 PV-27DF62 PV-27DF62-K

Note:

Refer to Item 3 of Schematic Diagram Notes of Schematic Diagram and Circuit Board Layout Notes, for mark "PT"

6. DISASSEMBLY/ASSEMBLY PROCEDURES

6.1. CABINET SECTION

6.1.1. Disassembly Flowchart

Perform all disassembly procedures in the order described in the "Disassembly Flowchart" shown below. When reassembling, use the reverse procedure.

CAUTION:

Disconnect AC plug before disassembly.

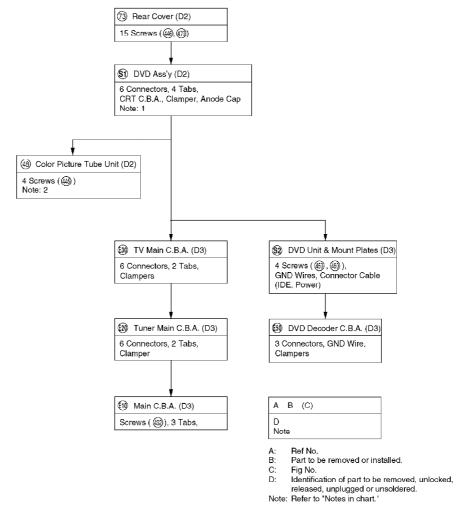
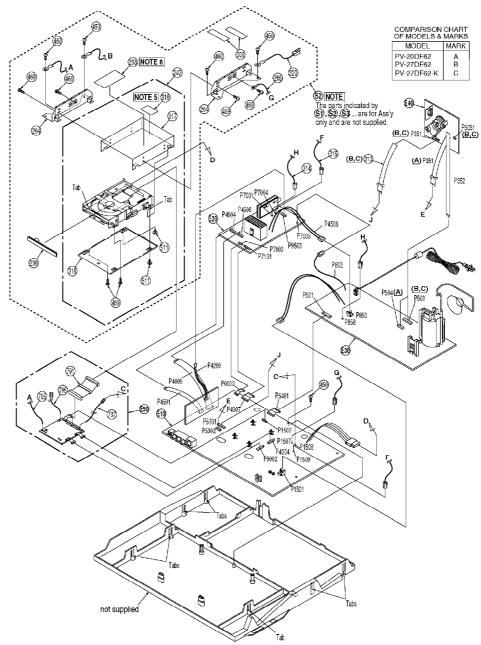


Fig. D2

Note: Parts with no Ref. No. in "EXPLODED VIEWS" are not supplied.
And some Ref. No. will be skipped. Be sure to make your orders of replacement parts according to the parts list.

IMPORTANT SAFETY NOTICE
COMPONENTS IDENTIFIED BY THE SIGN A HAVE
SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE
ONLY THE SPECIFIED PARTS. (B,C) (46) (B,C) 49∕1∧ 13 ((<u>(B,C)</u> (S) NOTE The parts indicated by S1, S2, S3... are for Ass'y only and are not supplied. (106)(B,C) **~**

Fig. D3

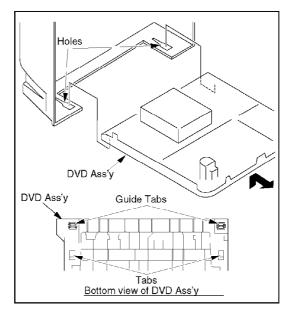


NOTE 5: When replacing the DVD Frame (Ref. No. 317), be sure to place the Rating Label (Ref. No. 318) on it.
NOTE 6: When replacing the DVD Unit (Ref. No. 242), be sure to place the Cabinet Label (Ref. No. 253) on it.

6.1.1.1. Notes in chart

1. Removal of DVD Ass'y

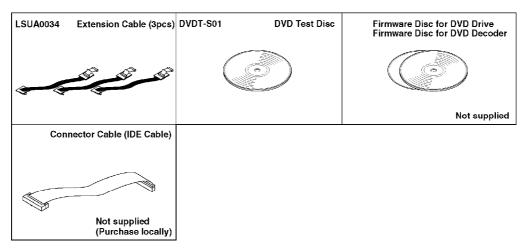
Fig. D4



2. Removal of Color Picture Tube Unit
Place the Unit face down on a soft cloth before removing the
Color Picture Tube Unit.

7. ADJUSTMENT PROCEDURES

7.1. SERVICE FIXTURES AND TOOLS



7.2. ELECTRICAL ADJUSTMENT

NOTE:

Following Adjustments have been preadjusted at factory and are not required.

- Purity Adjustment
- Static Central Convergence Adjustment
- Dynamic Convergence Adjustment

7.2.1. TEST EQUIPMENT

To do all of these electrical adjustments, the following equipment is required.

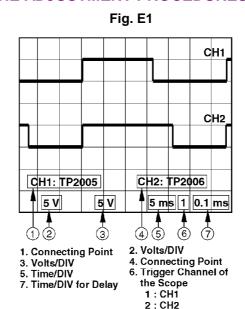
1. Dual-Trace Oscilloscope

Voltage Range: 0.001 V to 50 V/Div. Frequency Range: DC to 50 MHz

Probes: 10:1, 1:1

- 2. NTSC Video Pattern Generator
- 3. DVM (Digital Volt Meter)
- 4. MTS/SAP Signal Generator (TV Multi-Channel Sound Modulator (U.S.A.))
- 5. Plastic Tip Driver and Non-Metal Driver
- 6. Isolation Transformer (Variable)
- 7. Degaussing Coil
- 8. White Pattern Generator
- 9. Audio Generator
- 10. DVD Test Disc

7.2.2. HOW TO READ THE ADJUSTMENT PROCEDURES



7.2.3. STEREO/SAP SEPARATION ADJUSTMENT

Note:

Remove the DVD unit before performing this adjustment.

Purpose:

To separate the L and R Channels of Stereo Signal.

Symptom of Misadjustment:

The L and R Channels of Stereo Signal will not be separated properly resulting in no stereophonic effect.

Test Point:

TP9001 (Audio C.B.A.)

Adjustment:

R9001, R9008 (Audio C.B.A.)

Specification:

minimum level

INPUT:

Antenna Input Terminal MTS (ONLY L CH) 300 Hz±5 Hz, 3 kHz±5 Hz 14 % or 7 % Modulating

Mode:

STEREO audio (TV)

Equipment:

Oscilloscope, MTS/SAP Signal Generator

- 1. Set to TV mode, and then set to STEREO audio.
- 2. Connect the RF OUTPUT of the MTS/SAP Signal Generator to the Antenna Input Terminal.

Then, set the MTS/SAP Signal Generator as follows.

MTS (ONLY L CH)

300 Hz±5 Hz

14 % or 7 % Modulating

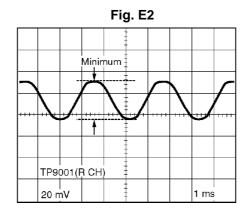
- 3. Connect the Oscilloscope to TP9001 on the Audio C.B.A.
- 4. Adjust R9001 (SEP (L)) on the Audio C.B.A. so that the signal level of TP9001 is minimum.
- 5. Set the MTS/SAP Signal Generator as follows.

MTS (ONLY L CH)

3 kHz±5 Hz

14 % or 7 % Modulating

6. Adjust R9008 (SEP (H)) on the Audio C.B.A. so that the signal level of TP9001 is minimum.



7.2.4. SEPARATION ADJUSTMENT

Note:

Be sure to perform this adjustment after STEREO/SAP SEPARATION ADJUSTMENT are completed.

Purpose:

To separate the L and R Channels of Stereo Signal.

Symptom of Misadjustment:

The L and R Channels of Stereo Signal will not be separated properly resulting in no stereophonic effect.

Test Point:

TP4202 (Audio C.B.A.)

Adjustment:

R9003 (Audio C.B.A.)

Specification:

minimum level

INPUT:

Antenna Input Terminal MTS (ONLY L CH) 300 Hz±5 Hz 14 % or 7 % Modulating

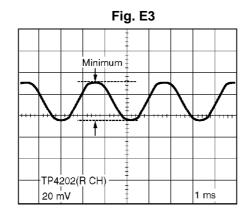
Mode:

STEREO audio (TV)

Equipment:

Oscilloscope, MTS/SAP Signal Generator

- 1. Connect the RF OUTPUT of the MTS/SAP Signal Generator to the Antenna Input Terminal.
- 2. Connect the Oscilloscope to TP4202 on the Audio C.B.A.
- 3. Set to TV mode, and then set to STEREO audio.
- 4. Adjust R9003 on the Audio C.B.A. so that the signal level is minimum.



7.2.5. FM VCO ADJUSTMENT

Note:

Remove the DVD unit before performing this adjustment.

Purpose:

To set VCO free run frequency.

Symptom of Misadjustment:

Even when stereophony is received, only monaural sound will be output.

Test Point:

Pin 21 of P4205, TP9201 (Audio C.B.A.)

Adjustment:

R9206 (Audio C.B.A.)

Specification:

38.0 kHz±50 Hz

Input:

Mode:

STEREO audio (FM Radio)

Equipment:

Frequency Counter

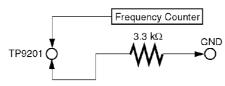
1. Connect Pin 21 of P4205 on Audio C.B.A. to GND.

Fig. E4-1



2. Connect TP9201 on Audio C.B.A. to GND through a resistor (3.3 k Ω). Then, connect Frequency Counter to TP9201.

Fig. E4-2



3. Adjust R9206 (FM VCO) so that the frequency is 38.0 kHz±50 Hz.

7.2.6. DVD LUMINANCE ADJUSTMENT

Purpose:

To set the optimum luminance level for DVD.

Symptom of Misadjustment:

The picture is too bright or too dark.

Test Point:

TP8201 (DVD Decoder C.B.A.)

Adjustment:

R8299 (DVD Decoder C.B.A.)

Specification:

1.0 V[P-P]±0.05 V[P-P]

Input:

Mode:

DVD PLAY

Equipment:

Oscilloscope, DVD Test Disc

1. Playback 100% Flat Field on the DVD Test Disc in DVD PLAY

Mode.

- 2. Connect the Oscilloscope to TP8201 on the DVD Decoder C.B.A. and GND (TP8203 on the DVD Decoder C.B.A.).
- 3. Adjust R8299 on the DVD Decoder C.B.A. so that the level A becomes 1.0 V[P-P]±0.05 V[P-P].

Fig. E5

7.2.7. EVR (Electronic Variable Register) ADJUSTMENT WITH THE REMOTE CONTROL

This unit has electronic technology using I2C Bus concept.

The following control functions are adjusted by using "On Screen Displays" and the remote control instead of adjusting mechanical controls (VR).

	% 1		
Control functions	Address	Range	Default
SUB COLOR	00	C0 - FF, 00 - 3F	20
SUB TINT	01	E0 - FF, 00 - 1F	00
SUB BRIGHT	02	C0 - FF, 00 - 3F	F0
CONTRAST	03	C1 - FF, 00	00
SUB SHARPNESS	04	E0 - FF, 00 - 1F	E2
R CUT -OFF	05	00 - 7F	1E
G CUT -OFF	06	00 - FD	3C
B CUT -OFF	07	00 - FD	3C
G DRIVE	08	00 - 7F	40
B DRIVE	09	00 - 7F	40
SUB CONTRAST	0 A	00 - 0F	06
H-CENTER	0 B	00 - 0F	08
V SIZE	0D	00 - 7F	40
V POSITION	0E	00 - 1F	00

Bold-faced letters → Control functions which need to be adjusted. Note:

7.2.8. EVR ADJUSTMENT ITEM

The following Items need to be adjusted for EVR adjustment.

- SUB CONTRAST ADJUSTMENT
- FOCUS, SCREEN, CUT OFF, DRIVE ADJUSTMENT
- SUB COLOR/SUB TINT ADJUSTMENT
- FOCUS ADJUSTMENT
- DEFLECTION DISTORTION CORRECTION ADJUSTMENT

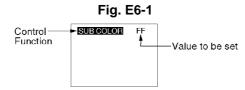
¹ Address is not displayed on the TV screen. Other Addresses except above are not used.

- WHITE BALANCE ADJUSTMENT
- SUB BRIGHTNESS ADJUSTMENT

7.2.9. HOW TO ENTER EVR ADJUSTMENT MODE

Press and hold STOP, SKIP + and VOL - buttons of operation panel on the unit together over 5 seconds with no cassette inserted.

The adjustment overlay will appear to Enter EVR adjustment mode.



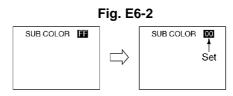
7.2.9.1. How to adjust:

1. Press UP/DOWN key on the remote control to select control function to be adjusted.

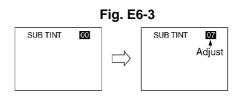
Important Note:

Make a note of the original value of the controls before modifying in case the wrong control is adjusted.

2. Press RIGHT/LEFT key on the remote control so that the shaded area moves to the value.



3. Press UP/DOWN key on the remote control to adjust the value of the selected control.

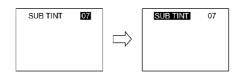


Note:

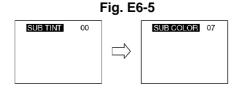
You can select a desired channel by using the numbered keys on the remote control in EVR adjustment mode.

4. Press RIGHT/LEFT key on the remote control so that the shaded area moves to the control function.

Fig. E6-4



5. Press UP/DOWN key on the remote control to select a control function for the next adjustment if necessary.



7.2.9.2. How to release from EVR Adjustment Mode:

Press and hold STOP, SKIP + and VOL - buttons of operation panel on the unit together over 5 seconds again or press the POWER button OFF to release EVR adjustment mode. The adjusted value will be written to Memory IC (IC6004).

7.2.9.3. HOW TO ENTER SERVICE MODE

- 1. Set the unit to TV Mode.
- 2. Enter EVR adjustment mode.
- 3. Press DISPLAY key on the remote control for collapse scan.

Note:

Before pressing DISPLAY key on the remote control for collapse scan, select the desired control function and move the shaded area to the value for adjustments you will proceed.



7.2.9.4. How to release from Service Mode:

Press DISPLAY key again on the remote control.

7.2.10. SUB CONTRAST ADJUSTMENT

Purpose:

To set the optimum sub contrast level.

Symptom of Misadjustment:

The picture is too dark or too light.

Test Point:

TP49 (CRT C.B.A.)

Adjustment:

SUB CONTRAST (EVR),

Specification:

Refer to descriptions below.

Input:

Video Input Jack,

Crosshatch Pattern Signal 1 V[p-p] (75

☐ terminated)

Mode:

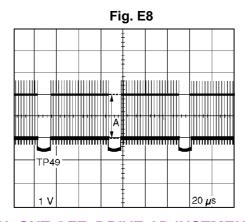
STOP

Equipment:

Oscilloscope,

NTSC Video Pattern Generator

- 1. Supply a Crosshatch Pattern Signal to the Video Input Jack.
- 2. Connect the Oscilloscope to TP49 on the CRT C.B.A. (Use TP47 for GND.)
- 3. Select SUB BRIGHT in EVR adjustment mode. Then, after making a note of the original value, adjust to the (C0).
- 4. Select SUB CONTRAST in EVR adjustment mode and adjust so that the level A is 1.9 V[p-p]±0.1 V[p-p] (For model with 20 inch CRT) or 2.0 V[p-p]±0.1 V[p-p] (For model with 27 inch CRT).
- 5. Select SUB BRIGHT in EVR adjustment mode and reset to the original value.



7.2.11. FOCUS, SCREEN, CUT OFF, DRIVE ADJUSTMENT

Purpose:

To set the optimum Screen.

Symptom of Misadjustment:

The picture is will be an improper screen color mix.

Test Point:

TP50 (CRT C.B.A.)

Adjustment:

FOCUS CONTROL

(Flyback Transformer),

SCREEN CONTROL (Flyback Transformer),

SUB BRIGHT (EVR),

G DRIVE (EVR),

B DRIVE (EVR),

R CUT-OFF (EVR),

G CUT-OFF (EVR),

B CUT-OFF (EVR)

Specification:

Refer to descriptions below.

Input:

Video Input Jack,

Monoscope Pattern Signal

Mode:

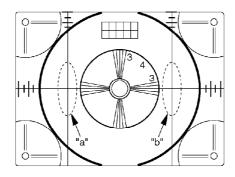
STOP

Equipment:

Oscilloscope,

NTSC Video Pattern Generator

- 1. Supply a Monoscope Pattern Signal to the Video Input Jack.
- 2. Connect the Oscilloscope to TP50 on the CRT C.B.A. (Use TP47 for GND.)
- 3. Select SUB BRIGHT and move the shaded area to the value in EVR adjustment mode.
- 4. Adjust the FOCUS CONTROL on the Flyback Transformer so that the "a" and "b" are the sharpest.



- 5. Turn the SCREEN CONTROL on the Flyback Transformer fully counterclockwise.
- 6. Press DISPLAY key on the remote control for collapse scan. (Refer to "HOW TO ENTER SERVICE MODE.")
- 7. Adjust SUB BRIGHT in EVR adjustment mode so that the level A is 170 VDC±5 VDC (For model with 20 inch CRT) or 175 VDC±5 VDC (For model with 27 inch CRT).

Fig. E9-2

TP50

TO V

To Manual Manu

- 8. Adjust SUB BRIGHT in EVR adjustment mode so that the level A is 175 VDC±5 VDC.
- 9. Turn the SCREEN CONTROL on the Flyback Transformer clockwise carefully and stop at the point where any color is first observed.
- 10. In EVR adjustment mode, select the two colors not observed in step 8 from the following control functions (R CUT-OFF, G CUT-OFF, B CUT-OFF) and adjust so that the horizontal line becomes white.
 - For example, if the horizontal line appeared red in step 8, select and adjust the B CUT-OFF and G CUT-OFF. (See NOTE)
- 11. Press DISPLAY key on the remote control again to return for full

frame scan.

- 12. Select SUB BRIGHT in EVR adjustment mode and adjust so that the picture has adequate brightness.
- 13. Select G DRIVE and B DRIVE in EVR adjustment mode and adjust so that the entire screen is white.

Note:

Before pressing DISPLAY key on the remote control for collapse scan, select the desired control function and move the shaded area to the value.

7.2.12. SUB COLOR/SUB TINT ADJUSTMENT

Purpose:

To set the standard color phase.

Symptom of Misadjustment:

Color phase will be shifted.

Test Point:

TP49 (CRT C.B.A.)

Adjustment:

SUB COLOR (EVR), SUB TINT (EVR),

Specification:

Refer to descriptions below.

Input:

Video Input Jack, Rainbow Color Bar

Mode:

STOP

Equipment:

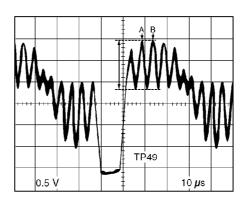
Oscilloscope, NTSC Video Pattern Generator

- 1. Supply the Rainbow Color Bar signal to Video Input Jack.
- 2. Connect the Oscilloscope to TP49 on the CRT C.B.A.
- 3. Select SUB BRIGHT in EVR adjustment mode. Then, after making

a note of original value, adjust to the (C0).

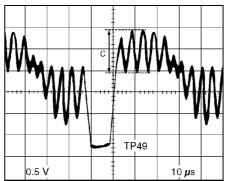
4. Select SUB TINT in EVR adjustment mode and adjust so that level A and B should be equal in amplitude.

Fig. E10-1



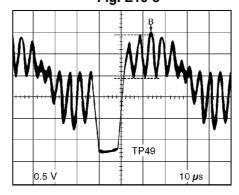
5. Select SUB COLOR in EVR adjustment mode and adjust which higher level that level C is 1.0 V[p-p]±0.15 V[p-p].

Fig. E10-2



6. Select SUB TINT in EVR adjustment mode and increase level B 2 clicks above the same level.

Fig. E10-3



7. Select SUB BRIGHT in EVR adjustment mode and reset to the original value.

7.2.13. FOCUS ADJUSTMENT

Note:

Be sure to perform this adjustment after SUB CONTRAST ADJUSTMENT and SUB BRIGHTNESS ADJUSTMENT are completed.

Purpose:

To set the optimum Focus.

Symptom of Misadjustment:

The picture is out of Focus.

Test Point:

TP551, TP552 (TV Main C.B.A.)

Adjustment:

FOCUS CONTROL (Flyback Transformer), SUB BRIGHT (EVR)

Specification:

Refer to descriptions below.

Input:

Video Input Jack, Monoscope Pattern Signal

Mode:

STOP

Equipment:

DVM,

NTSC Video Pattern Generator

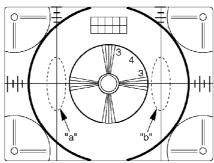
- 1. Turn off the set and connect DVM between TP551 and TP552 on the TV Main C.B.A.
- 2. Turn on the set.

Enter EVR adjustment mode refer to "HOW TO ENTER EVR ADJUSTMENT MODE."

- 3. Supply a Monoscope Pattern Signal to the Video Input Jack.
- 4. Select SUB BRIGHT in EVR adjustment mode and adjust so that the voltage is 1.5 VDC±0.1 VDC (For mode with 20 inch CRT) or 1.7 VDC±0.1 VDC (For mode with 27 inch CRT).

5. Adjust the FOCUS CONTROL on the Flyback Transformer so that the "a" and "b" is the sharpest.

Fig. E11



7.2.14. DEFLECTION DISTORTION CORRECTION ADJUSTMENT

Purpose:

To set the optimum picture.

Symptom of Misadjustment:

The picture is distortion.

Test Point:

Adjustment:

V POSITION (EVR), V SIZE (EVR), H-CENTER (EVR), R763 (TV Main C.B.A.), R753 (TV Main C.B.A.), R766 (TV Main C.B.A.)

Specification:

Refer to descriptions below.

Input:

Video Input Jack, Crosshatch Pattern Signal, Monoscope Pattern Signal

Mode:

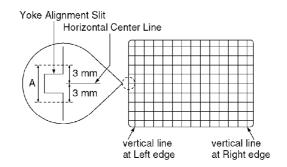
STOP

Equipment:

NTSC Video Pattern Generator

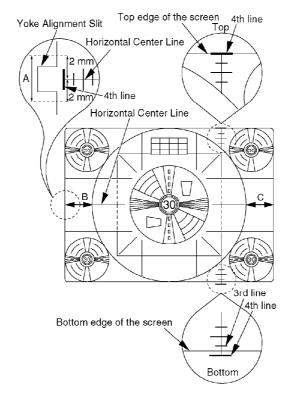
- 1. Supply a Crosshatch Pattern Signal to the Video Input Jack.
- 2. Confirm that the Horizontal Center Line is within the limits of A.

Fig. E12-1



- 3. (For model with 27 inch CRT)
 Adjust R763 so that vertical lines should be almost straight.
- 4. (For model with 27 inch CRT)
 Adjust R753 so that vertical lines at Left edge and Right edge should be almost straight.
- 5. Supply a Monoscope Pattern Signal to the Video Input Jack.
- 6. Select V POSITION in EVR adjustment mode and adjust Horizontal Center Line is within the limits of A.

Fig. E12-2



- 7. Select V SIZE in EVR adjustment mode and adjust so that the top 4th line is just in view.
- 8. Confirm that the bottom 3rd line is in view and that the bottom 4th line is out of view.
 - If the line are not positioned correctly, repeat the above step 6 and 7 until the line is positioned correctly.
- 9. Select H-CENTER in EVR adjustment menu and adjust so that B is approximately equal to width C.
- 10. (For model with 27 inch CRT)

 Adjust R766 so that the left 4th line is just in view.

7.2.15. WHITE BALANCE ADJUSTMENT

Purpose:

To set the standard white level for each color temperature.

Symptom of Misadjustment:

White becomes bluish or reddish.

Test Point:

TP50 (CRT C.B.A)

Adjustment:

```
FOCUS CONTROL
(Flyback Transformer),
SCREEN CONTROL (Flyback Transformer),
SUB BRIGHT (EVR),
G DRIVE (EVR),
B DRIVE (EVR),
R CUT-OFF (EVR),
G CUT-OFF (EVR),
B CUT-OFF (EVR)
```

Specification:

Refer to descriptions below.

Input:

Video Input Jack, Monoscope Pattern Signal, White Pattern Signal

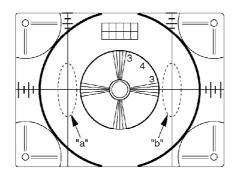
Mode:

STOP

Equipment:

NTSC Video Pattern Generator, White Pattern Generator, Oscilloscope

- 1. Supply a Monoscope Pattern Signal to the Video Input Jack.
- 2. Connect the Oscilloscope to TP50 on the CRT C.B.A. (Use TP47 for GND.)
- 3. Select SUB BRIGHT and move the shaded area to the value in EVR adjustment mode.
- 4. Adjust the FOCUS CONTROL on the Flyback Transformer so that the "a" and "b" are the sharpest.



- 5. Turn the SCREEN CONTROL on Flyback Transformer fully counterclockwise.
- 6. Press DISPLAY key on the remote control for collapse scan. (Refer to "HOW TO ENTER SERVICE MODE.")
- 7. Adjust SUB BRIGHT in EVR adjustment mode so that the level A is 170 VDC±5 VDC (For model with 20 inch CRT) or 175 VDC±5 VDC (For model with 27 inch CRT).

- 8. Turn the SCREEN CONTROL on the Flyback Transformer clockwise carefully and stop at the point where red or blue is first observed.
- 9. In EVR adjustment mode, select the two colors not observed in step 8 from the following control functions (R CUT-OFF, G CUT-OFF, B CUT-OFF) and adjust so that the horizontal line becomes white.
 - For example, if the horizontal line appeared red in step 8, select and adjust the B CUT-OFF and G CUT-OFF. (See NOTE)
- 10. Supply a White Pattern Signal to the Video Input Jack.
- 11. Press DISPLAY key on the remote control again to return for full frame scan.

- 12. Select G DRIVE and B DRIVE in EVR adjustment mode and adjust so that the entire screen is white.
- 13. Confirm that the screen is tracking the White Pattern properly. If NG, repeat the above steps 8, 9 and 12 until the screen is properly tracking the White Pattern.
- 14. Select SUB BRIGHT in EVR adjustment mode and adjust correctly.

Note:

Before pressing DISPLAY key on the remote control for collapse scan, select the desired control function and move the shaded area to the value.

7.2.16. SUB BRIGHTNESS ADJUSTMENT

Note:

Perform this adjustment in a darkened room.

Purpose:

To set the optimum brightness level.

Symptom of Misadjustment:

The picture is too white or too black.

Test Point:

Adjustment:

SUB BRIGHT (EVR),

Specification:

Refer to descriptions below.

Input:

Mode:

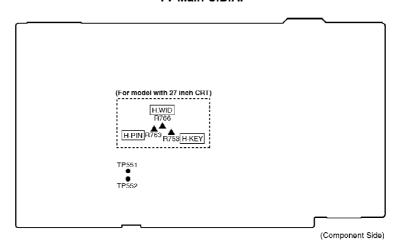
STOP

- 1. Do not input any signal to the unit.
- 2. Set INPUT SELECT item to LINE in SET UP TV menu to display black screen.
- 3. Select SUB BRIGHT in EVR adjustment mode, and adjust so that

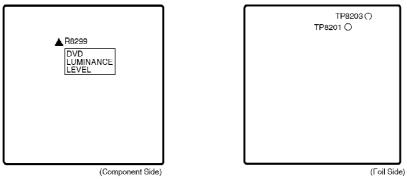
the black screen starts to turn gray (lighting only).

7.3. TEST POINTS AND CONTROL LOCATION

TV Main C.B.A.



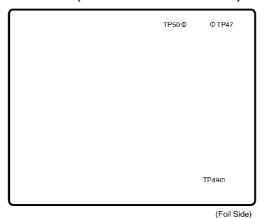
DVD Decoder C.B.A.



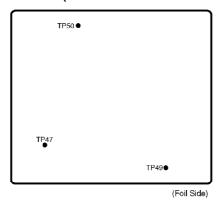
Test Point Information

- Test Point with a Test Pin.
- $\ensuremath{\oplus}$ Test Point with a jumper wire across a hole in the P.C.B.
- O Test Point with no Test Pin.

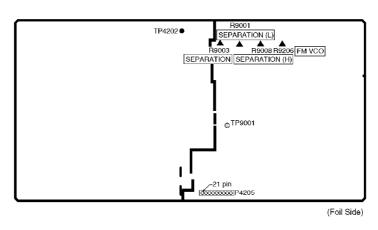
CRT C.B.A. (For model with 27 inch CRT)



CRT C.B.A. (For model with 20 inch CRT)



Audio C.B.A.



8. SCHEMATIC DIAGRAMS

- 8.1. SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES
- 8.2. MAIN SCHEMATIC DIAGRAMS
- 8.3. AUDIO SCHEMATIC DIAGRAMS
- **8.4. TUNER MAIN SCHEMATIC DIAGRAMS**
- 8.5. TV MAIN SCHEMATIC DIAGRAMS
- 8.6. CRT SCHEMATIC DIAGRAM (MODEL: PV-20DF62)
- 8.7. CRT SCHEMATIC DIAGRAM (MODELS: PV-27DF62/PV-27DF62-K)
- 8.8. DVD DECODER SCHEMATIC DIAGRAMS

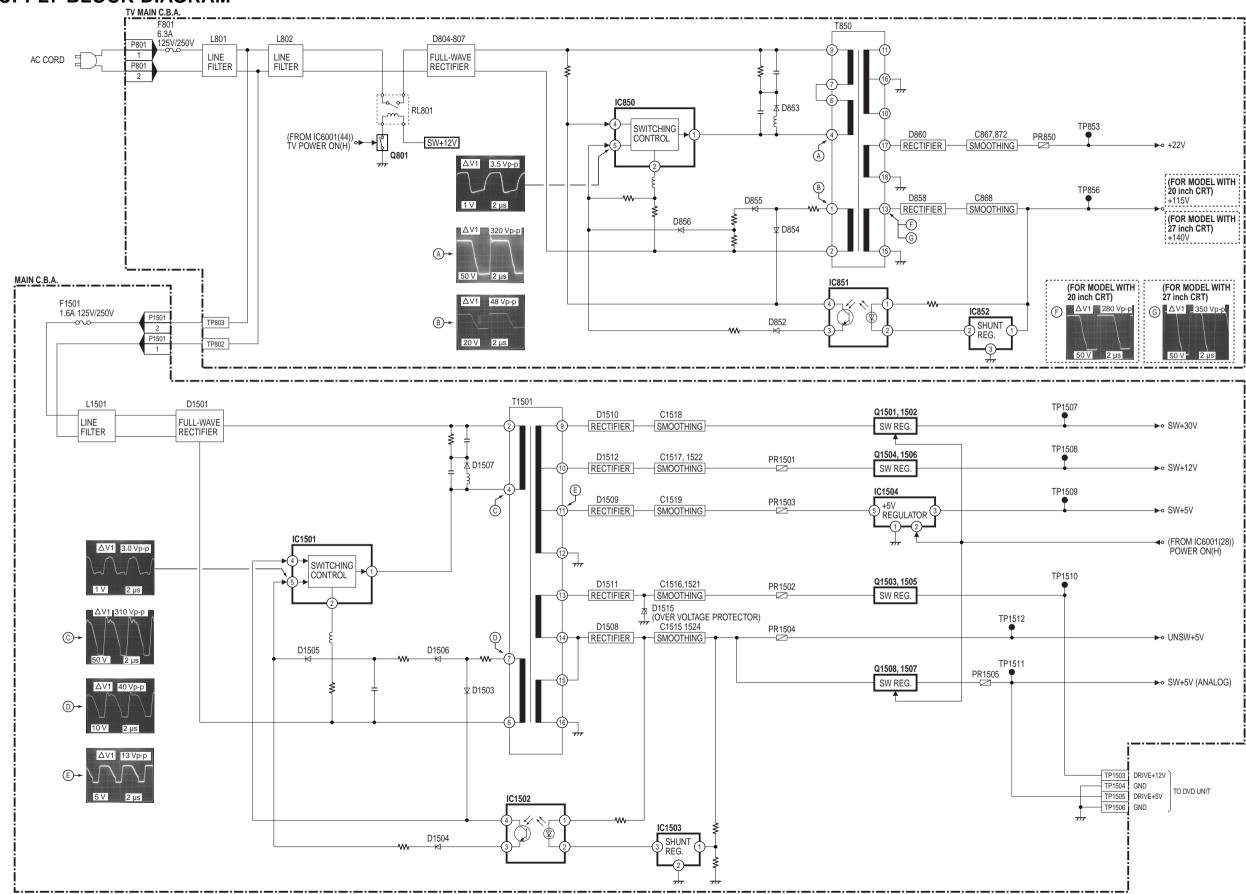
8.9. INTERCONNECTION SCHEMATIC DIAGRAM

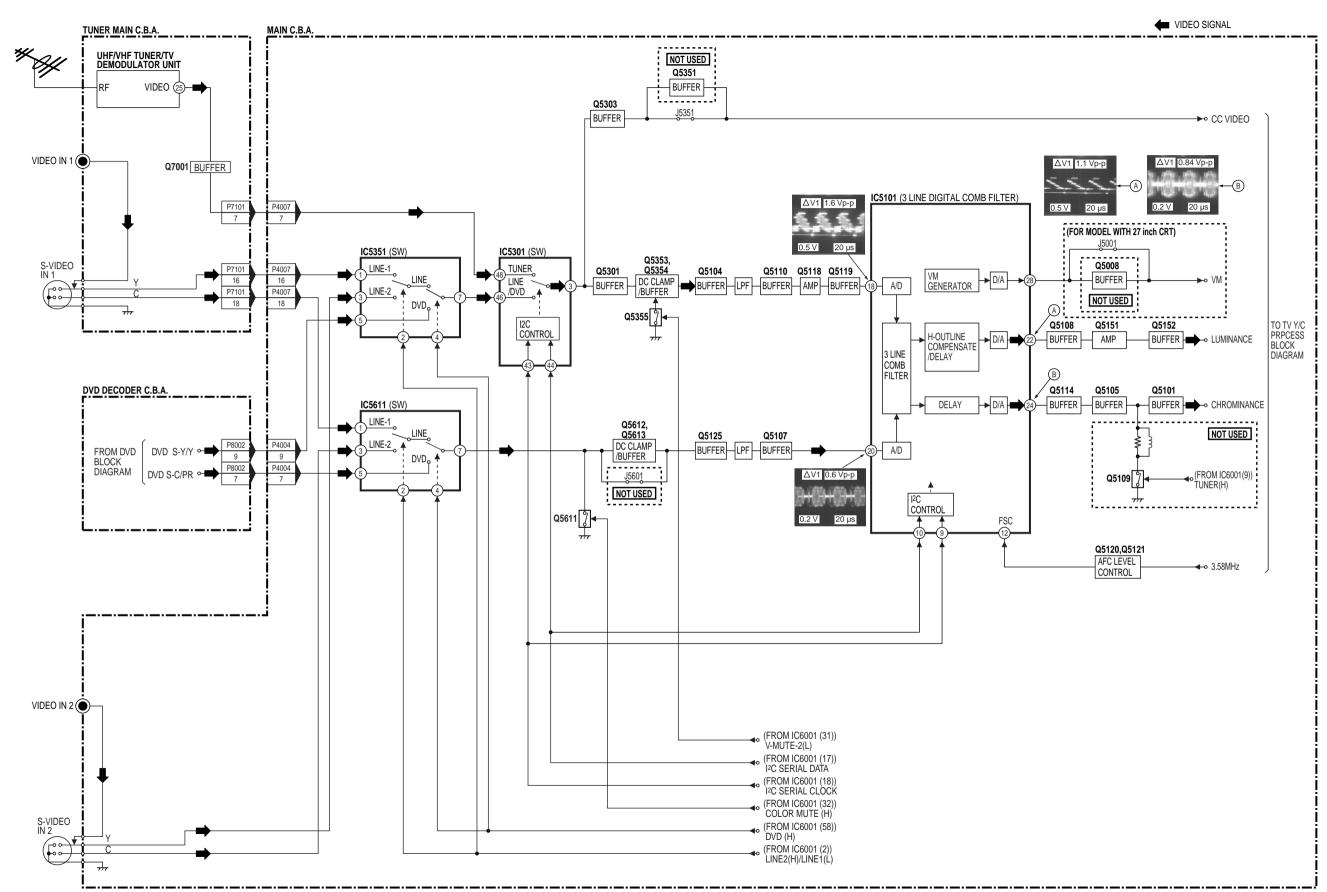
8.10. VOLTAGE CHART

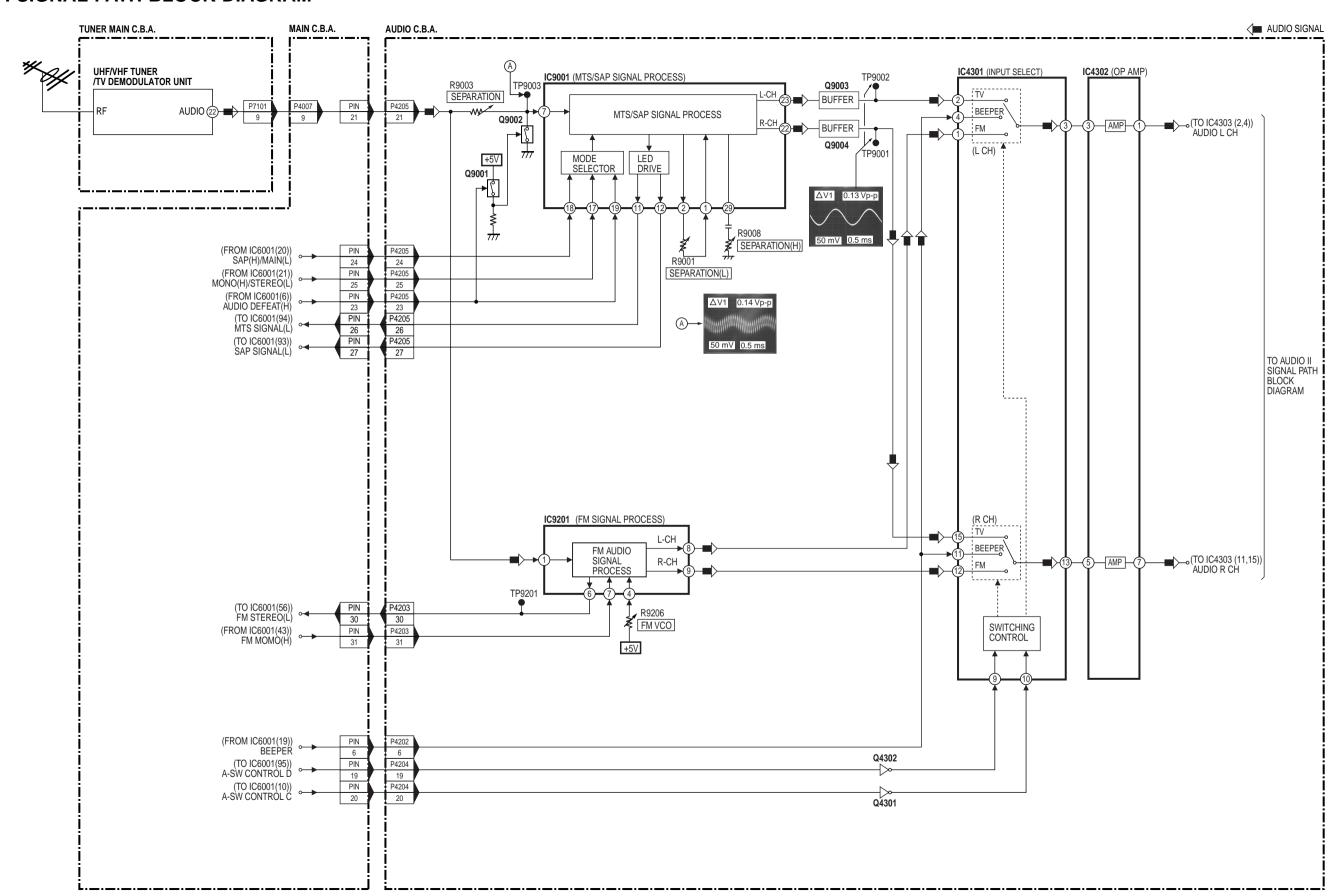
9. CIRCUIT BOARD LAYOUT

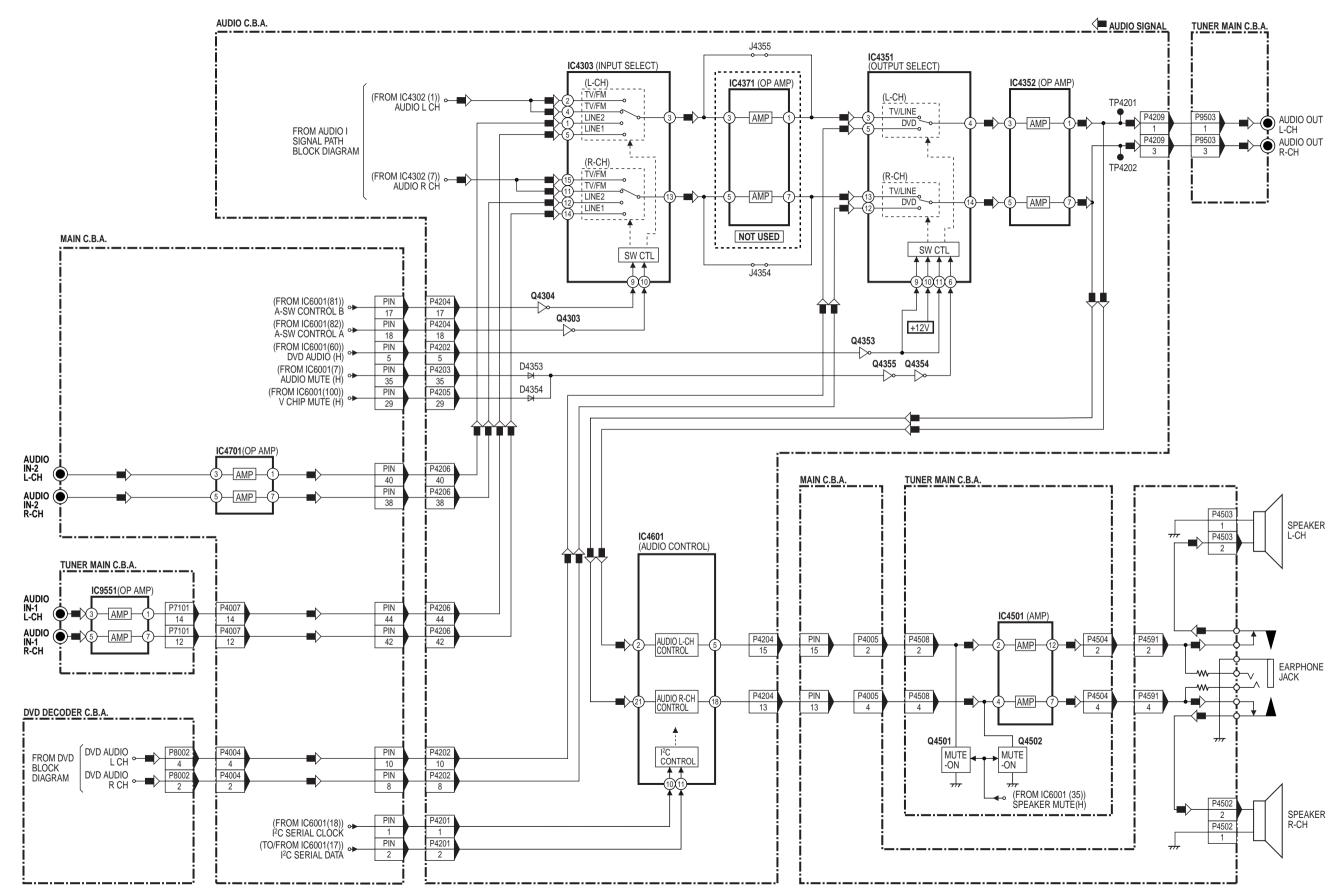
- 9.1. MAIN C.B.A.
- 9.2. AUDIO C.B.A.
- 9.3. TUNER MAIN C.B.A.
- 9.4. TV MAIN C.B.A.
- 9.5. CRT C.B.A.
- 9.6. DVD DECODER C.B.A.
- 10. BLOCK DIAGRAMS
- 11. EXPLODED VIEWS
- 11.1. CHASSIS FRAME SECTION (1)

POWER SUPPLY BLOCK DIAGRAM

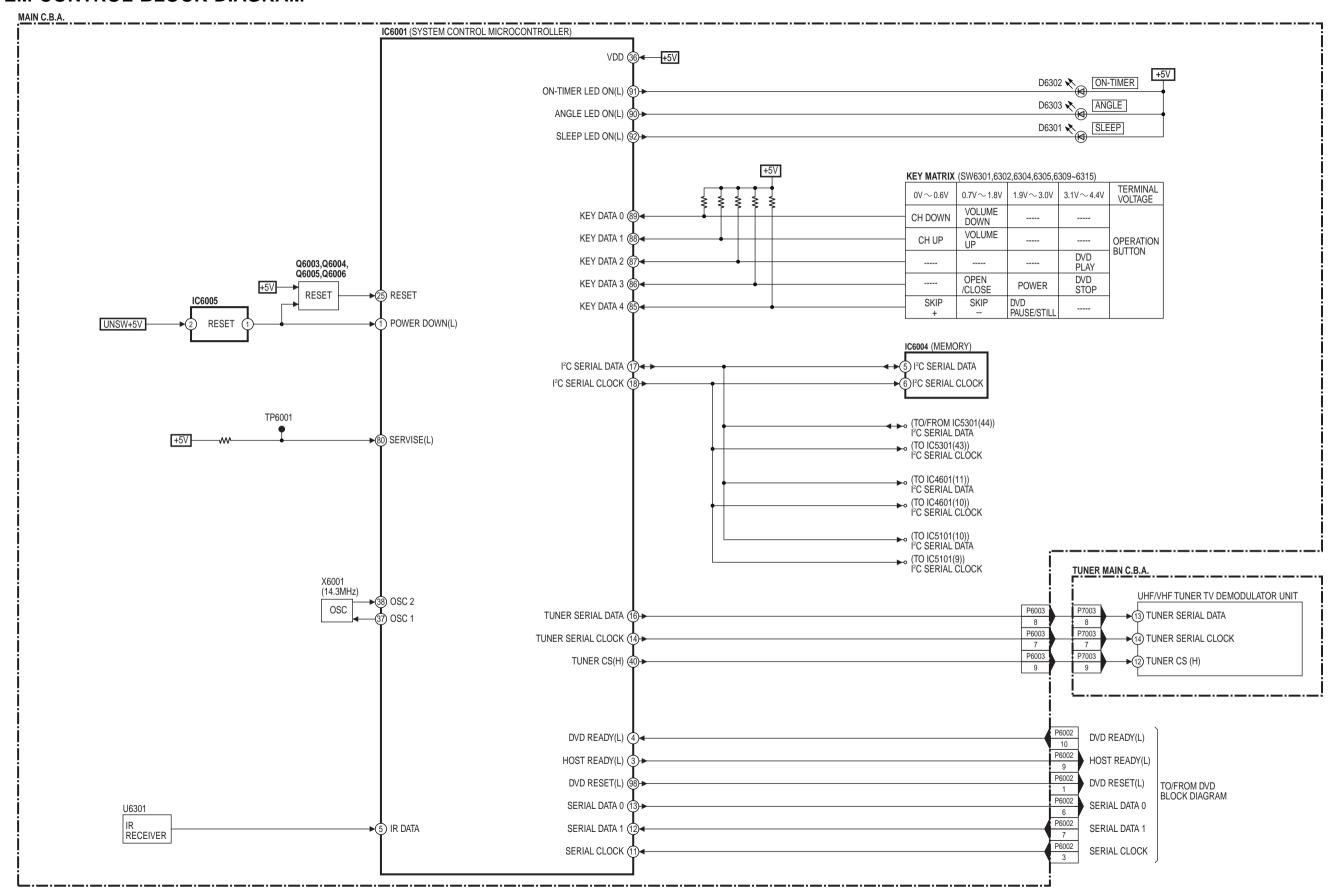


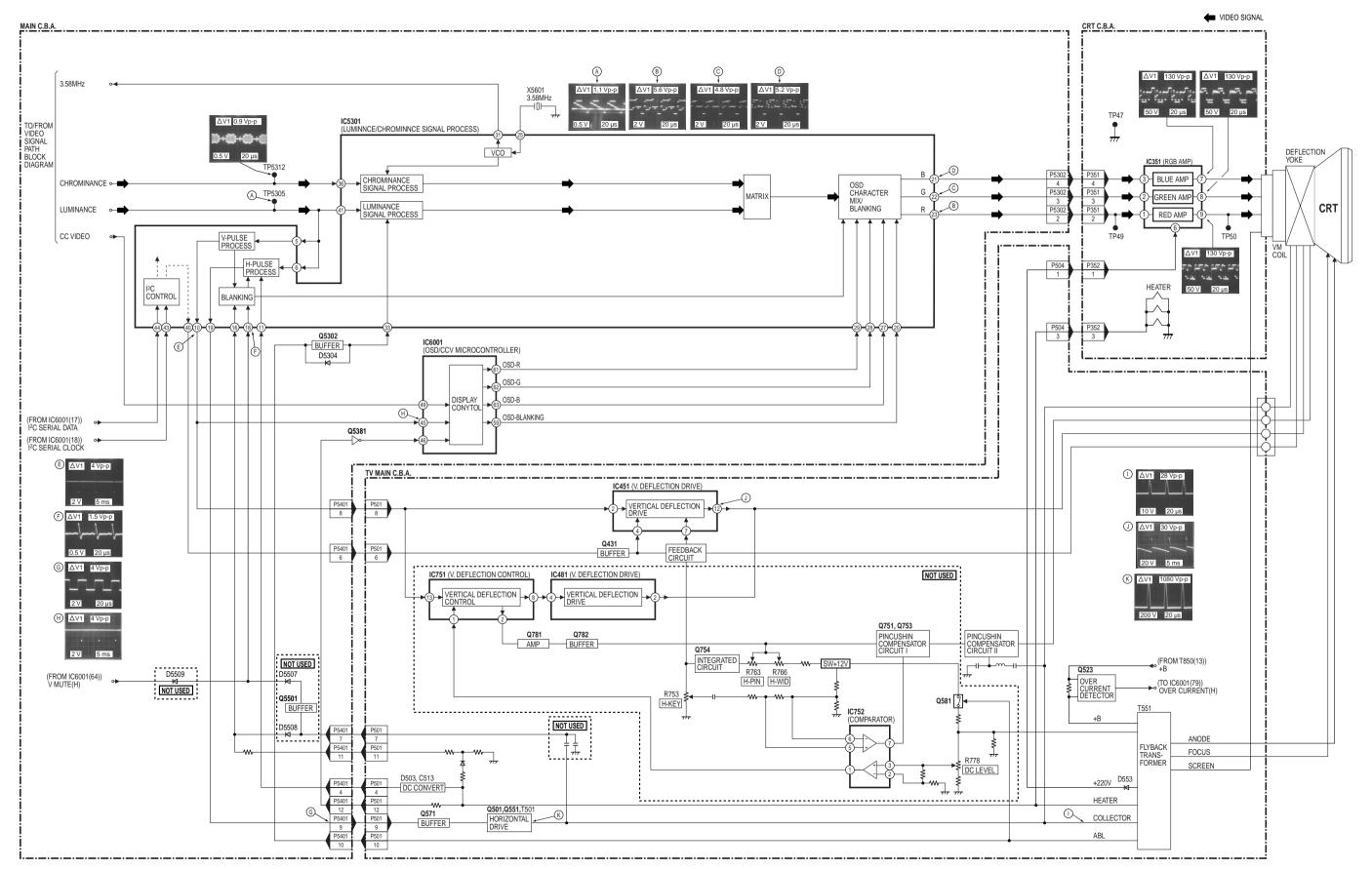


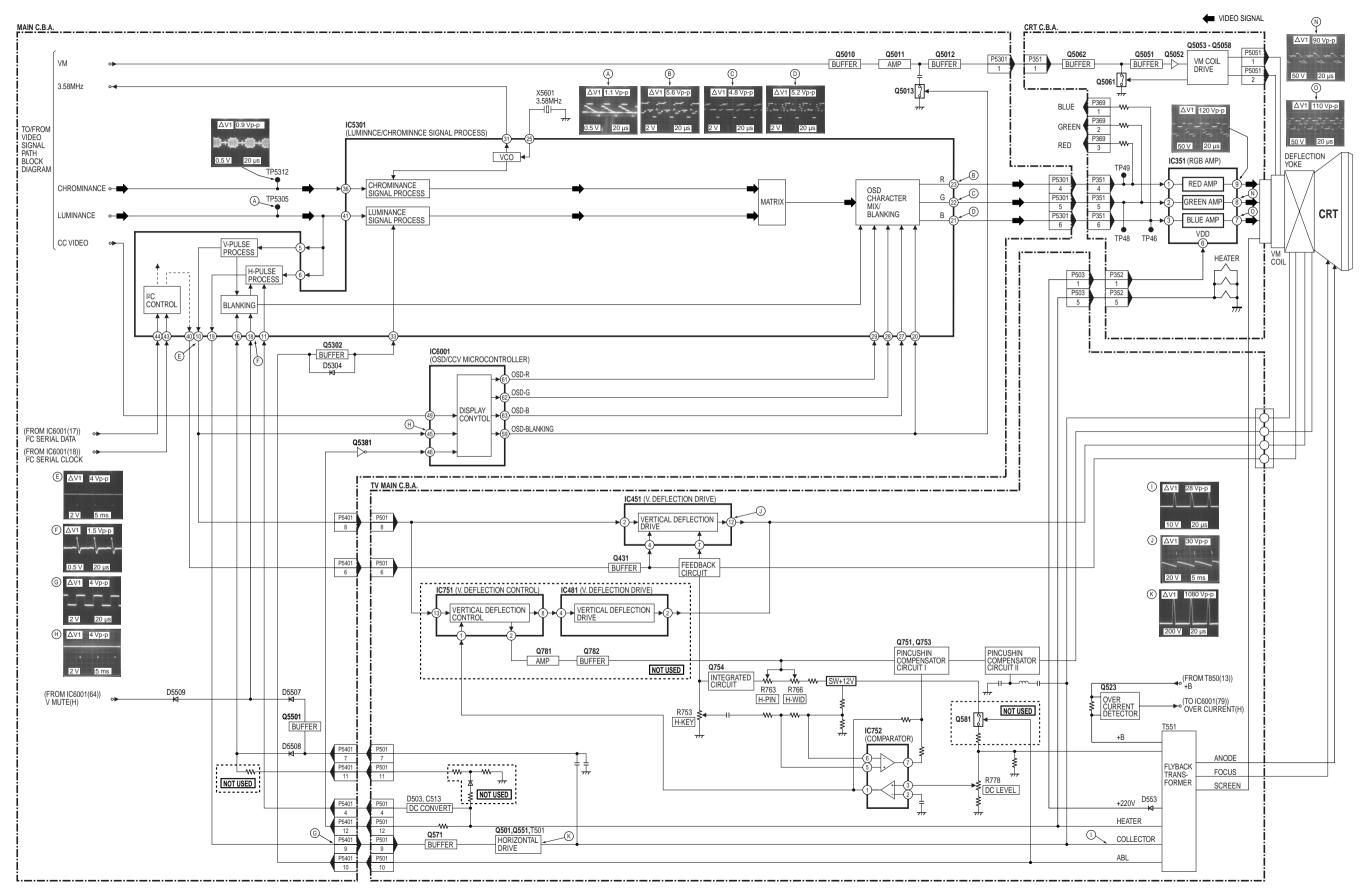


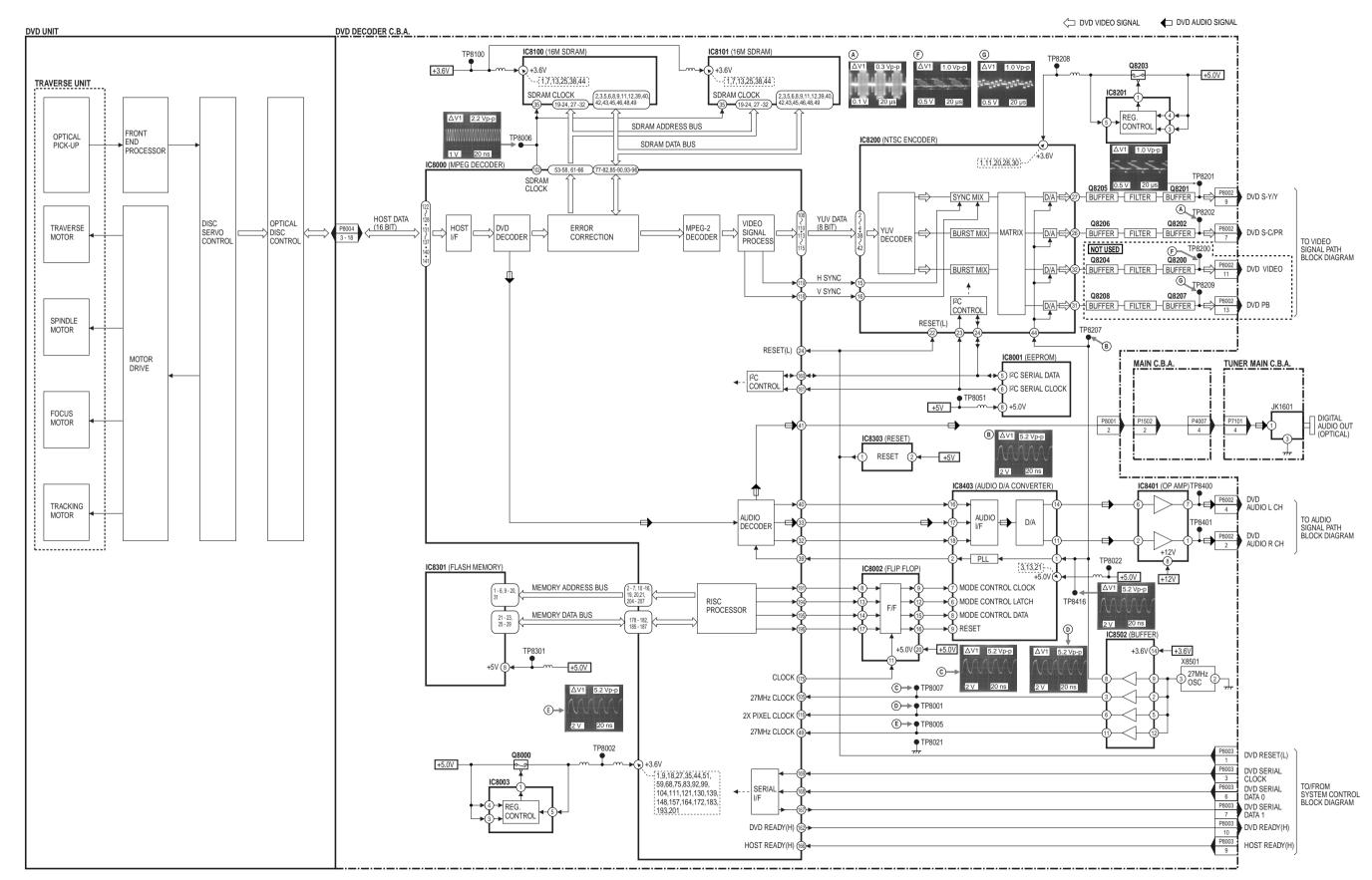


SYSTEM CONTROL BLOCK DIAGRAM





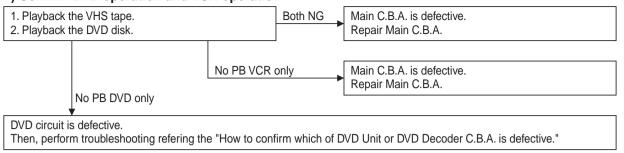




Troubleshooting Hints

How to confirm which of DVD circuit or other circuits is defective.

1) Confirm DVD operation and VCR operation

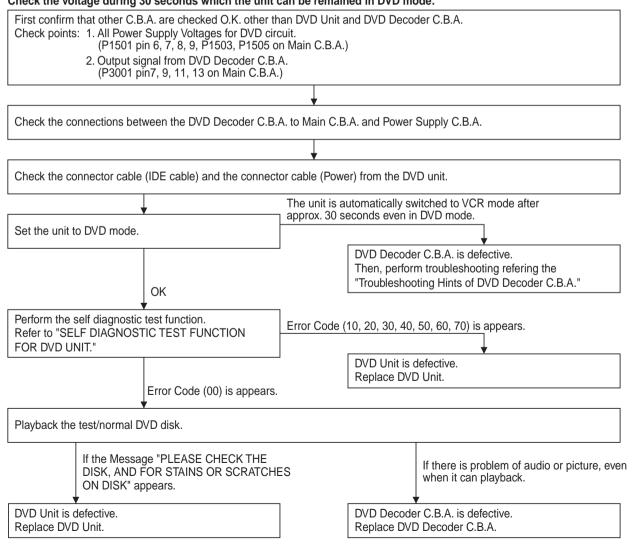


How to confirm which of DVD Unit or DVD Decoder C.B.A. is defective.

NOTE:

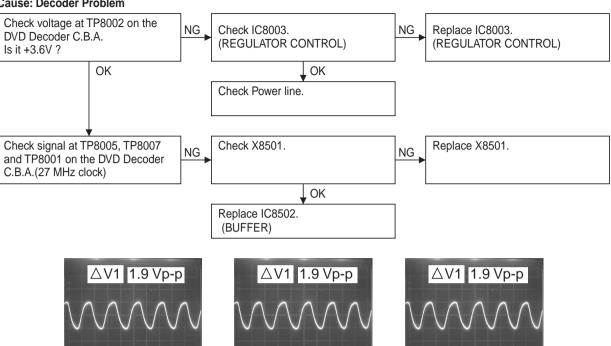
Host communication may not be done correctly between IC6001 on the Main C.B.A. and IC8000 on the DVD Decoder C.B.A. when there is a problem on the DVD Decoder C.B.A.

In that case, the unit is automatically switched to VCR mode after approx. 30 seconds even in DVD mode becouse the DVD Decoder C.B.A. is shut down. (Check the VCR mode indicator and DVD mode indicator on the Multi Function Display.) Check the voltage during 30 seconds which the unit can be remained in DVD mode.



Troubleshooting Hints of DVD Decoder C.B.A.

Cause: Decoder Problem



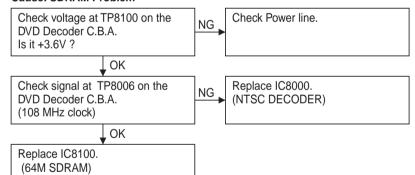
20 ns

TP8007

20 ns

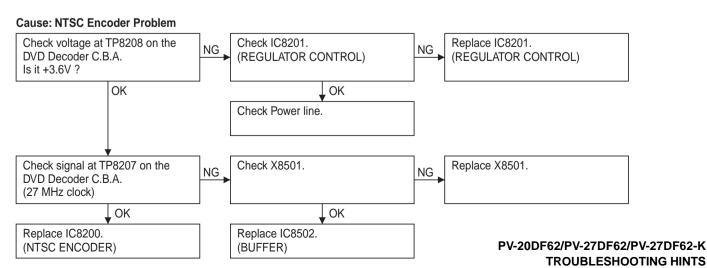
TP8001

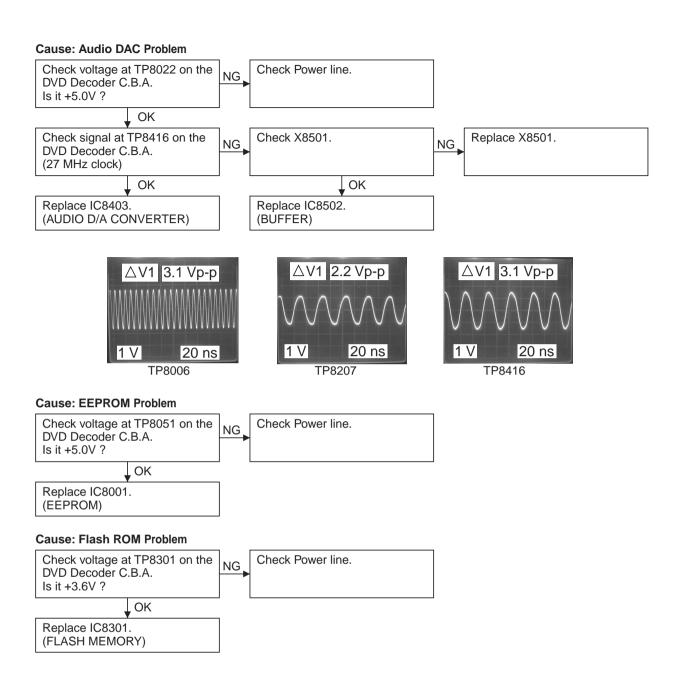
Cause: SDRAM Problem



l20 nsl

TP8005





MAIN C.B.A. LSEP2055B (A) / LSEP2055A (B,C)

NOTE:

FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES, REFER TO BEGINNING OF SCHEMATIC SECTION.

CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,
REPLACE ONLY WITH THE SAME TYPE 1.6A 125/250V FUSE.
ATTENTION: POUR UNE PROTECTION CONTINUE LES RISQUES
D'T INCENDIE N'I UTILISERQUE DES FUSIBLE DE MÉME
TYPE 1.6A 125/250V

IMPORTANT SAFETY NOTICE:

COMPONENTS IDENTIFIED BY THE SIGN ⚠ HAVE

SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY.

WHEN REPLACING ANY OF THESE COMPONENTS,

USE ONLY THE SPECIFIED PARTS

NOTE:

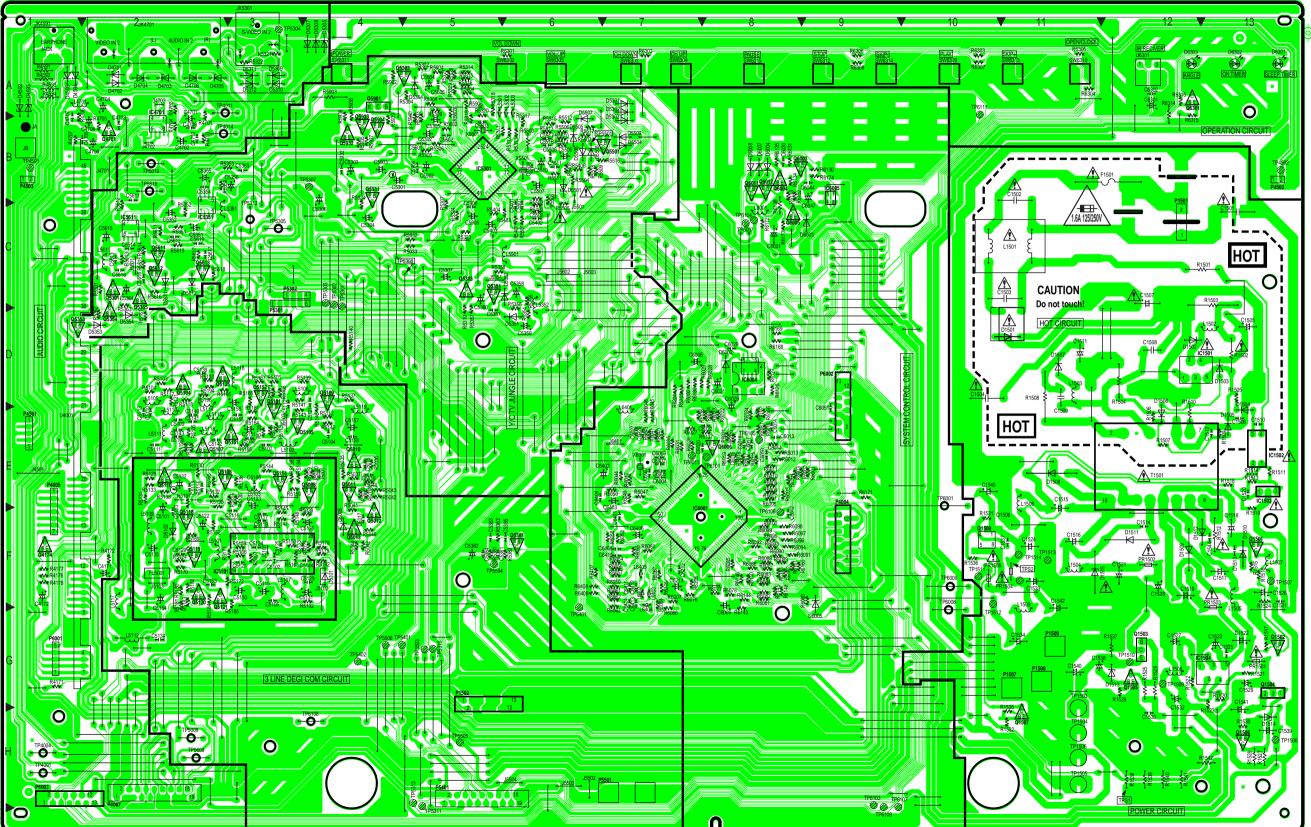
CIRCUIT BOARD LAYOUT INCLUDES COMPONENTS WHICH ARE NOT USED.
PLEASE REFER TO THE SCHEMATIC DIAGRAM AND PARTS LIST FOR PROPER PARTS CONTENT.

HOT CIRCUIT, BE CAREFUL AND USE AN ISOLATION TRANSFORMER WHEN SERVICING.

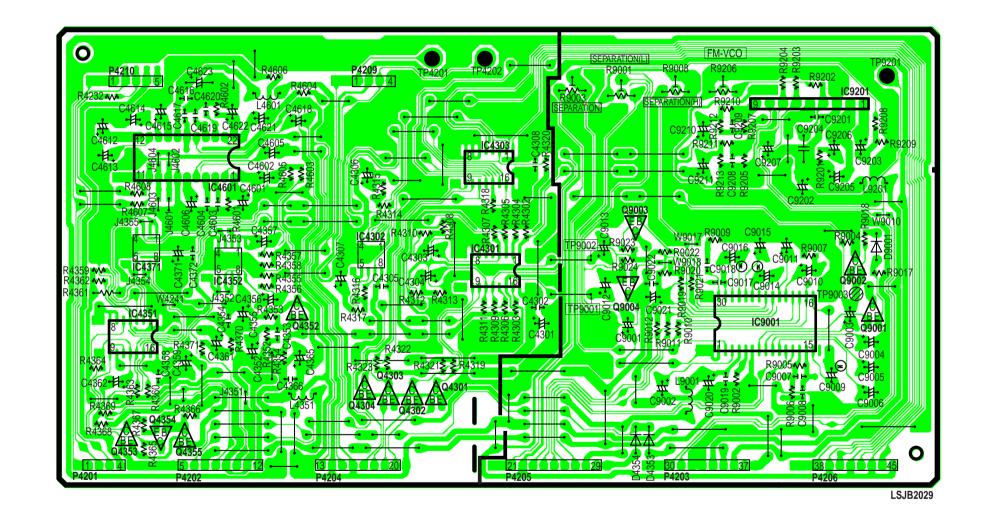
COMPARISON CHART
OF MODELS & MARKS

MODEL MARK

PV-20DF62 A
PV-27DF62 B
PV-27DF62-K C

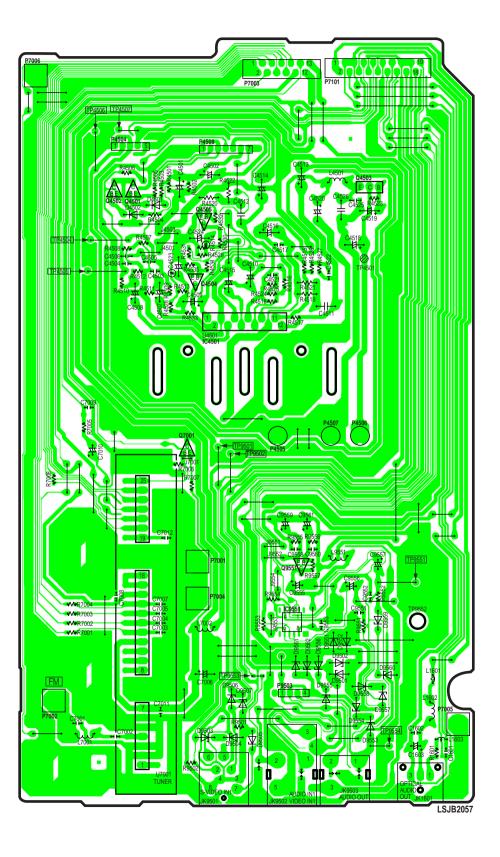


NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.



NOTE:
CIRCUIT BOARD LAYOUT INCLUDES COMPONENTS WHICH ARE NOT USED.
PLEASE REFER TO THE SCHEMATIC DIAGRAM AND PARTS LIST FOR PROPER PARTS CONTENT.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.



CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,
REPLACE ONLY WITH THE SAME TYPE 6.3A 125V/250V FUSE.
ATTENTION: POUR UNE PROTECTION CONTINUE LES RISQUES
D' INCENDIE N' UTILISERQUE DES FUSIBLE DE MÉME
TYPE 6.3A 125V/250V

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE SIGN A HAVE
SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS,
USE ONLY THE SPECIFIED PARTS.

OTE:

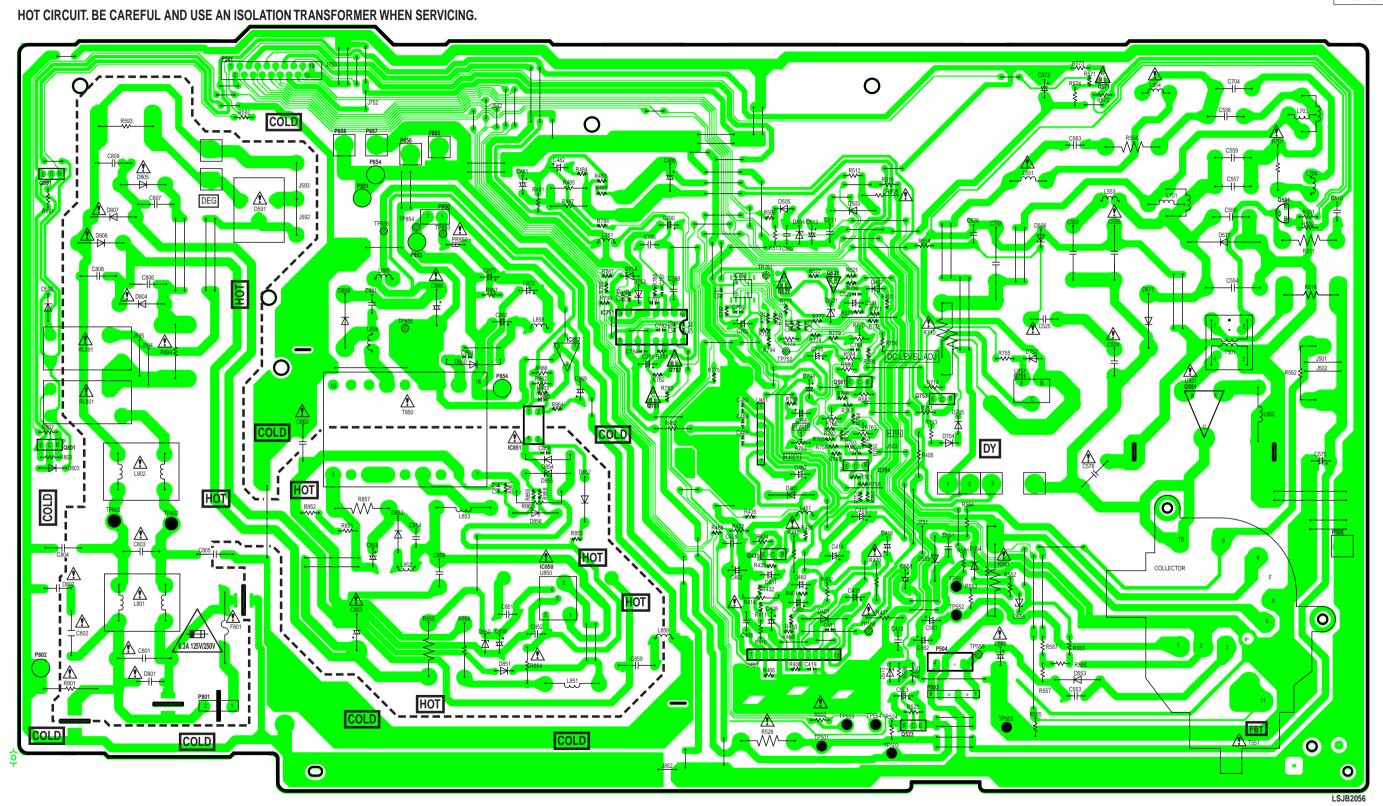
CIRCUIT BOARD LAYOUT INCLUDES COMPONENTS WHICH ARE NOT USED.
PLEASE REFER TO THE SCHEMATIC DIAGRAM AND PARTS LIST FOR PROPER PARTS CONTENT.

NOTE:

FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES, REFER TO BEGINNING OF SCHEMATIC SECTION.

COMPARISON CHART OF MODELS & MARKS

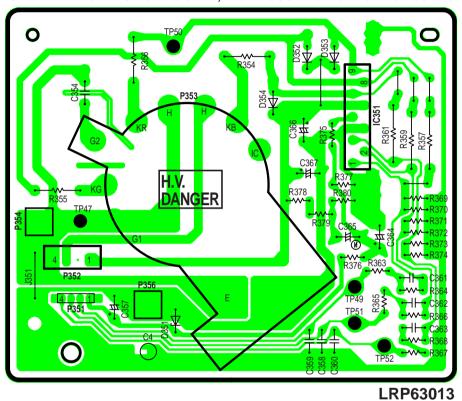
MODEL	MARK
PV-20DF62	Α
PV-27DF62	В
PV-27DF62-K	С



MODEL	MARK
PV-20DF62	Α
PV-27DF62	В
PV-27DF62-K	С

CIRCUIT BOARD LAYOUT INCLUDES COMPONENTS WHICH ARE NOT USED.
PLEASE REFER TO THE SCHEMATIC DIAGRAM AND PARTS LIST FOR PROPER PARTS CONTENT.

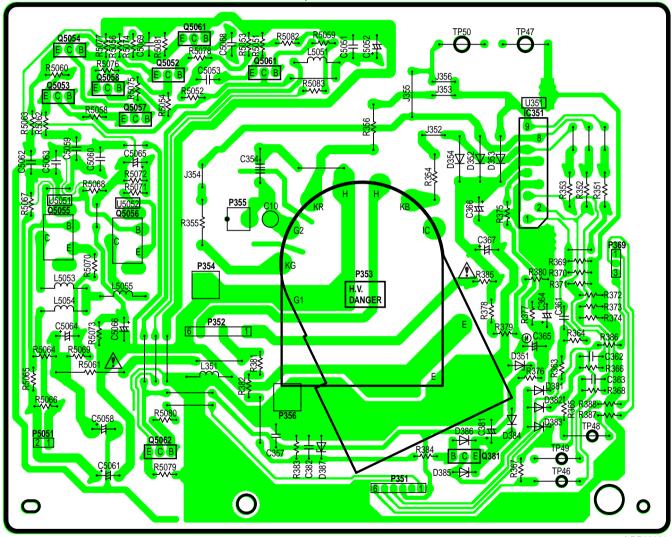
CAUTION: WHEN SERVICING THIS C.B.A., AVOID TOUCHING HIGH VOLTAGE COMPONENTS.



NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

CIRCUIT BOARD LAYOUT INCLUDES COMPONENTS WHICH ARE NOT USED.
PLEASE REFER TO THE SCHEMATIC DIAGRAM AND PARTS LIST FOR PROPER PARTS CONTENT.

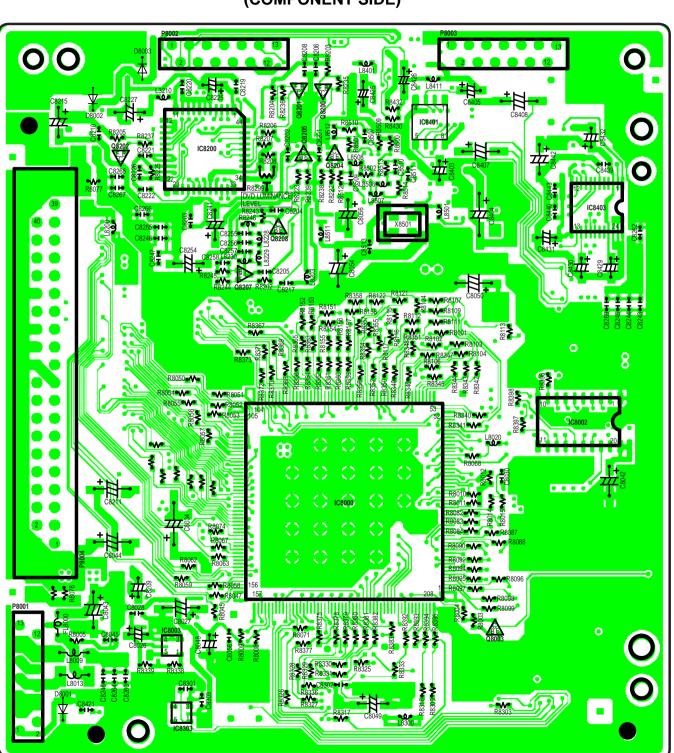
CAUTION: WHEN SERVICING THIS C.B.A., AVOID TOUCHING HIGH VOLTAGE COMPONENTS.



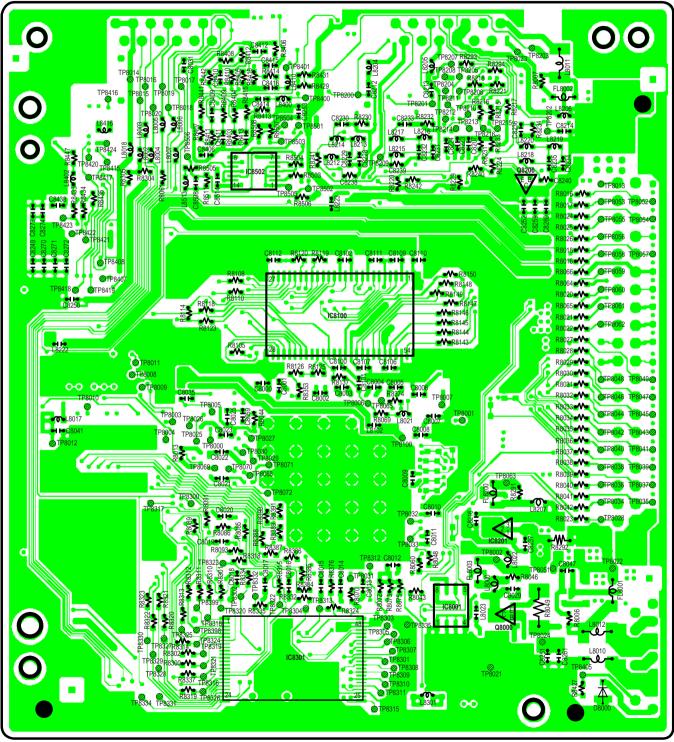
LRP63021

FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES, REFER TO BEGINNING OF SCHEMATIC SECTION.

(COMPONENT SIDE)



(FOIL SIDE)





Panasonic®

TV/DVD Combination **Operating Instructions**

Models No. **PV-20DF62/PV-27DF62**



• Initial Setup and Connection Procedures are on pages 10 to 15.

















As an ENERGY STAR Partner, Matsushita Electric Corporation of America has determined that this product or product model meets the ENERGY STAR guidelines for energy efficiency.

Please read these instructions carefully before attempting to connect, operate, or adjust this product. Please save this manual. Spanish Quick Use Guide is included.

(Guía para rápida consulta en español está incluida.)

For assistance, please call: 1-800-211-PANA(7262) or send e-mail: consumerproducts@panasonic.com

LSQT0581

Important Safeguards and Precautions

READ AND RETAIN ALL SAFETY AND OPERATING INSTRUCTIONS. HEED ALL WARNINGS IN THE MANUAL AND ON UNIT

INSTALLATION

POWER SOURCE CAUTION

Operate only from power source indicated on unit or in this manual. If uncertain, have your Electric Utility Service Company or Video Products Dealer verify your home power source.

2 POWER CORD PLUG

For safety, this unit has a polarized type plug (one wide blade), or a three-wire grounding type plug. Always hold the plug firmly and make sure your hands are dry when plugging in or unplugging the AC power cord. Regularly remove dust, dirt, etc. on the plug.

POLARIZED PLUG CAUTION:

The plug fits into outlet only one way. If it cannot be fully inserted, try reversing it. If it still will not fit, have an electrician install the proper wall outlet. Do not tamper with the plug.

GROUNDING PLUG CAUTION: The plug requires a three-hole grounding outlet. If necessary, have an electrician install the proper outlet. Do not tamper with the plug.

3 POWER CORD

To avoid unit malfunction, and to protect against electrical shock, fire or personal injury:

- Keep power cord away from heating appliances and walking traffic. Do not rest heavy objects on, or roll such objects over the power cord.
- Do not tamper with the cord in any way.
 An extension cord should have the same type plug (polarized or grounding) and must be securely connected.
- Overloaded wall outlets or extension cords are fire hazards.
- Frayed cords, damaged plugs, and damaged or cracked wire insulation are hazardous and should be replaced by a qualified electrician

4 DO NOT BLOCK VENTILATION HOLES Ventilation openings in the cabinet release heat

generated during operation. If blocked, heat build-up may result in a fire hazard or heat damage to discs.

For your protection:

- a. Never cover ventilation slots while unit is ON, or operate unit while placed on a bed, sofa, rug, or other soft surface.
- b. Avoid built-in installation, such as a book case or rack, unless properly ventilated.

5 AVOID EXTREMELY HOT LOCATIONS OR SUDDEN TEMPERATURE CHANGES

Do not place unit over or near a heater or radiator, in direct sunlight, inside closed vehicles, in high temperature [over 95 °F (35 °C)], or in over 75% humidity. If unit is suddenly moved from a cold place to a warm one, moisture may condense in unit and on the tape causing damage. Never subject unit to vibration, impact, or place it so that the surface is tilted as internal parts may be seriously damaged

6 TO AVOID PERSONAL INJURY

- Never place unit on support or stand that is not firm, level, and adequately strong. The unit could fall causing serious injury to a child or adult and damage to the unit.
- · Move any appliance and cart combination with care. Quick stops, excessive force, and uneven surfaces may cause objects to overturn.
- · Carefully follow all operating instructions.

OUTDOOR ANTENNA INSTALLATION

1 SAFE ANTENNA AND CABLE CONNECTION

An outside antenna or cable system must be properly grounded to provide some protection against built up static charges ANTENN LEAD IN and voltage. Section 810 of the National Electrical Code. ANSI/NFPA 70 (in Canada, part 1 of the Canadian Electrical Code) provides information regarding proper grounding of

the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding

electrodes, and requirements for the grounding electrode. 2 KEEP ANTENNA CLEAR OF HIGH VOLTAGE POWER LINES OR CIRCUITS

Locate an outside antenna system well away from power lines and electric light or power circuits so it will never touch these power sources should it ever fall. When installing antenna, absolutely never touch power lines, circuits or other power sources as this could be fatal.

USING THE UNIT

Before unit is brought out of storage or moved to a new location, refer again to the INSTALLATION section of these safeguards.

- 1 KEEP UNIT WELL AWAY FROM WATER OR
- MOISTURE, such as vases, sinks, tubs, etc.
 2 IF EXPOSED TO RAIN, MOISTURE, OR STRONG IMPACT, unplug unit and have it inspected by a qualified service technician before use.

3 ELECTRICAL STORMS

During a lightning storm, or before leaving unit unused for extended periods of time, disconnect all equipment from the power source as well as the antenna and cable system.

4 WHEN UNIT IS PLUGGED IN

- DO NOT OPERATE IF:
- liquid has spilled into unit.
- unit was dropped or otherwise damaged.
- unit emits smoke, odours, or noises.

Immediately unplug unit, and have it inspected by a service technician to avoid potential fire and shock hazards.

- Never drop or push any object through openings in unit. Touching internal parts may cause electric shock or fire hazard. Do not put any foreign object on the tray
- Keep magnetic objects, such as speakers, away from unit to avoid electrical interference.

5 USING ACCESSORIES

Use only accessories recommended by the manufacturer to avoid risk of fire, shock, or other hazards.

CLEANING UNIT

Unplug unit. Use a clean, dry, chemically untreated cloth to gently remove dust or debris. DO NOT USE cleaning fluids, aerosols, or forced air that could over-spray, or seep into unit and cause electrical shock. Any substance, such as wax, adhesive tape, etc. may mar the cabinet surface. Exposure to greasy, humid, or dusty areas may adversely affect internal parts.

SERVICE

1 DO NOT SERVICE PRODUCT YOURSELF

If, after carefully following detailed operating instructions, the unit does not operate properly, do not attempt to open or remove covers, or make any adjustments not described in the manual. Unplug unit and contact a qualified service technician.

2 REPLACEMENT OF PARTS

Make sure the service technician uses only parts specified by the manufacturer, or have equal safety characteristics as original parts. The use of unauthorized substitutes may result in fire, electric shock, or other hazards.

3 SAFETY CHECK AFTER SERVICING

After unit is serviced or repaired, request that a thorough safety check be done as described in the manufacturer's service literature to ensure video unit is in safe operating condition.

Safety Precautions/Mesures de sécurité

Warning: To prevent fire or shock hazard, do not expose this equipment to rain or moisture. Caution: To prevent electric shock, match wide blade of plug to wide slot, fully insert. Avertissement: Afin de prévenir tout risque d'incendie ou de chocs électriques, ne pas

exposer cet appareil à la pluie ou à une humidité excessive.

Attention :Pour éviter les chocs électriques, introduire la lame la plus large de la fiche dans la borne correspondante de la prise et pousser jusqu'au fond.

FCC WARNING: Any unauthorized changes or modifications to this equipment would void the user's authority to operate.

This television receiver provides display of television closed captioning.

CAUTION:

UNIT IS A CLASS I LASER PRODUCT.
HOWEVER THIS UNIT USES A VISIBLE LASER BEAM WHICH COULD CAUSE HAZARDOUS RADIATION EXPOSURE IF DIRECTED. BE SURE TO OPERATE THE UNIT CORRECTLY AS INSTRUCTED.
WHEN THIS UNIT IS PLUGGED TO THE WALL OUTLET, DO NOT PLACE YOUR EYES CLOSE TO THE OPENING OF THE DISC TRAY AND OTHER OPENINGS TO LOOK INTO THE INSIDE OF THIS UNIT. USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

DO NOT OPEN COVERS AND DO NOT ATTEMPT TO REPAIR THE UNIT YOURSELF. REFER SERVICING TO QUALIFIED PERSONNEL.

CAUTION:

LASER RADIATION WHEN OPEN. DO NOT STARE INTO BEAM.

ATTENTION:

RAYONNEMENT LASER EN CAS D'OUVERTURE. NE PAS REGARDER DANS LE FAISCEAU.

(Inside of product)

FCC NOTICE:

This equipment has been tested and found to comply with part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when operated in a residential environment. If this eqiupment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, use the equipment in another location and/or utilize an electrical outlet different from that used by the receiver. If necessary, consult the dealer or an experienced radio/TV technician for help. You may find the booklet, 'Something About Interference' available from FCC local regional offices helpful.

This product utilizes both a Cathode Ray Tube (CRT) and other components that contain lead. Disposal of these materials may be regulated in your community due to environmental considerations. For disposal or recycling information please contact your local authorities, or the Electronics Industries Alliance: http://www.eiae.org.>



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK) NO USER-SERVICEABLE PARTS INSIDE REFER SERVICING TO QUALIFIED SERVICE PERSONNEL





This symbol warns the user that uninsulated voltage within the unit may have sufficient magnitude to cause electric shock. Therefore, it is dangerous to make any kind of contact with any inside part of this unit.

This symbol alerts the user that important literature concerning the operation and maintenance of this unit has been included. Therefore, it should be read carefully in order to avoid any problems.

Region Management Information

Region Management Information: This unit is designed and manufactured to respond to the Region Management Information that is recorded on a DVD disc. If the Region number described on the DVD disc does not correspond to the Region number of this unit, this unit cannot play this disc.

The Region number for this unit is 1.



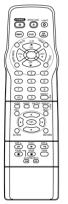
Before Using

Congratulations

on your purchase of one of the most sophisticated and reliable products on the market today. Used properly, it will bring you and your family years of enjoyment. Please fill in the information below. The serial number is on the tag located on the back of your unit.

_	Date of Purchase —	`
	Dealer Purchased From	
	Dealer Address	
	Dealer Phone No.	
	Model No	
	Serial No	

Accessories



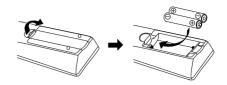
☐ Remote Control LSSQ0346

☐ Batteries 2 "AA"



To order accessories, call toll free 1-800-332-5368.

Loading the Batteries



□ Battery replacement caution

- Do not mix old and new batteries.
- Do not mix alkaline with manganese batteries.

Features for a Quality Picture

Pure Flat Picture Tube

This unit is equipped with pure flat Picture Tube.

Apparatus Claims of U.S. Patent Nos. 4,631,603, 4,577,216, and 4,819,098, licensed for limited viewing uses only.

This product incorporates copyright protection technology that is protected by method claims of certain U.S. Patents and other intellectual property rights owned by Macrovision Corporation and other rights owners. Use of this copyright protection technology must be authorized by Macrovision Corporation, and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision Corporation. Reverse engineering or disassembly is prohibited.

Table of Contents

Initial Setu	qı	
TV	Important Safeguards and Precautions / Safety Precautions 2 ~ 3 Before Using 4 Information (Unit, Disc) 6, 7 Location of Controls 8, 9 Connections / Initial Setup 10, 11 Reset Language, Channels, Clock, Time Zone Adjust 12, 13 Audio Connections 14, 15	Initial Setup
DVD Opera	ation	DV
DVD	Basic DVD Operation	DVD Operation
TV Operat	ion	_
TV	TV Operation 18 MTS Broadcast / TV Stereo System 19 Closed Caption System 20, 21 TV Timer Features 22 On-Screen Display (OSD) 23 FM Radio 24, 25	TV Operation
Advanced	Operation	
DVD	Cable Box Universal Remote Control Feature 26, 27 Special Features 28, 29 V-Chip Control Feature 30 ~ 33 Video / Audio Menu 34 Video / Audio Adjustment 35 Disc Operation 36 ~ 40 DVD Operation using On-Screen Displays 41 ~ 43 MP3 Playback Operation 44 DVD Lock Feature 45 Settings for DVD Operation 46 ~ 48 Language Code List 49	Advanced Operation
For Your I	nformation	For
TV	Before Requesting Service	r Your Information

Information (Unit, Disc)

Specifications

Display

Picture Tube: 20 inch diagonal pure flat Picture Tube (PV-20DF62) 27 inch diagonal pure flat Picture Tube (PV-27DF62)

Tuner

Broadcast Channels: VHF 2 ~ 13, UHF 14 ~ 69 CABLE Channels: Midband A through I (14 ~ 22) Superband J through W (23 ~ 36) Hyperband AA ~ EEE (37 ~ 64) Lowband A-5 ~ A-1 (95 ~ 99) Special CABLE channel 5A (01)

FM Radio

87.5 ~ 108.1 MHz Band range: General Power Source: 120V AC, 60 Hz

Power Consumption: Power On

Approx. 113 watts (PV-20DF62) Approx. 146 watts (PV-27DF62)

Ultraband 65 ~ 94, 100 ~ 125

Power Off

Approx. 3.5 watts Television System: EİA Standard NTSC color 2 pieces (5.0W x 2)

Speaker: 5 °C ~ 35 °C (41 °F ~ 95 °F) Operating Temperature:

Operating Humidity: 10% ~ 75%

28 kg (61.6 lbs.) (PV-20DF62) Weight:

Dimensions:

47 kg (103.4 lbs.) (PV-27DF62) 604 (W) x 523 (H) x 503 (D) mm 23-13/16" (W) x 20-9/16" (H) x 19-13/16" (D) (PV-20DF62) 760 (W) x 651 (H) x 503 (D) mm

29-15/16" (W) x 25-5/8" (H) x 19-13/16" (D) (PV-27DF62)

Discs played (1) DVD-VIDEO disc

5" (12 cm) single-sided, single-layer 5" (12 cm) single-sided, double-layer 5" (12 cm) double-sided, double-layer (one layer per side)

3" (8 cm) single-sided, single-layer 3" (8 cm) single-sided, double-layer 3" (8 cm) double-sided, double-layer

(one layer per side) Compact disc 5" (12 cm) disc (CD-DA, VIDEO CD) 3" (8 cm) disc (2) Compact disc

Digital audio output:

Optical connector Optical digital output:

Pickup: Wavelength: 655 nm (DVD), 790 nm (Video CD/CD)

Laser power: CLASS II

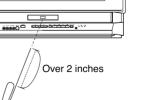
Note :Designs and specifications are subject to change without notice.

If the disc cannot be removed...

First, unplug unit.

Then, prepare a rigid wire (e.g. an extended paper clip) and, applying moderate force, insert it straight into the hole at the base of the tray. The tray will eject a little. Then, pull the tray all the way out and remove the disc.





Disc formats supported by this unit

The unit can play back discs bearing any of the following marks:



DVD

3" (8 cm) disc / 5" (12 cm) disc



Video CD

3" (8 cm) disc / 5" (12 cm) disc



CD

3" (8 cm) disc / 5" (12 cm) disc

Discs which cannot be played with this unit

- DVD with Region No. other than "1" or "ALL"
- DVD of PAL system
- DVD-ROM
- DVD-R/DVD-RAM
- DVD-R/DVD-RAM
- CD-ROM
- CDV CD-G

Do not try to play a Photo CD.



is a registered trademark.

Definition of Terms

Angle

Some DVD discs feature scenes simultaneously shot from different angles. The ANGLE button can be used to view the scene from different angles. (ANGLE Indicator lights up on the unit when a scene recorded at different angles is detected.)

Chapter Number

Titles are subdivided into numbered sections. You can quickly search for a favorite scene using these numbers. ${\bf DVD}$

A high-density optical disc on which high-quality pictures and sound have been digitally recorded. DVD incorporates new video compression technology (MPEG II) and high-density recording technology which allow entire movies to be recorded with incredible playback quality.

Playback Control

With Video CD (version 2.0), scenes or information may be selected for viewing or listening from an interactive menu that appears on the TV screen.

Subtitles

Written dialogue which appears at the bottom of the screen. **Time Number**

The elapsed play time from the start of a disc or title. Use to quickly find scenes. (May not work with some discs.) **Title Number**

For DVD discs with two or more titles, the title is numbered as title 1, title 2, etc.

Track Number

Numbers assigned to tracks on Video CDs and CDs to allow specific tracks to be quickly located.

Video CD

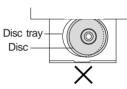
CD containing picture and sound with same quality level as video tape. This unit also supports Video CDs with playback control (version 2.0).

Disc Handling

Handling precautions

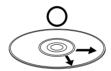
- Only hold disc by edges as shown.
 Fingerprints, dirt, and scratches can cause skipping and distortion.
- Do not write on label side of disc.
- Never use record cleaning sprays, benzine, thinner, static electricity prevention liquids, or any other solvent.
- Be careful not to drop or bend disc.
- Do not place more than 1 disc on disc tray.
- Do not try to close disc tray when disc is not properly placed.
- Always store discs in their proper cases when not in use.





To clean disc surface

With a soft, damp (water only) cloth, gently wipe from the center hole to the outer edge as shown below. (Wiping in a circular pattern will scratch the surface.)





If disc is brought from a cold to a warm environment, moisture may form on the disc

Wipe away moisture with a soft, dry, lint-free cloth before using disc. (See above.)

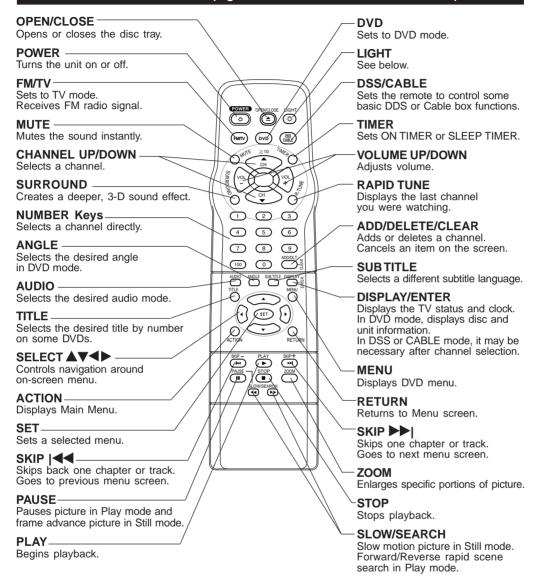
Improper disc storage

Discs could be damaged if stored or left in areas:

- · exposed to direct sunlight.
- that are humid or dusty.
- near heat (i.e. heater, radiator, etc.).

Location of Controls

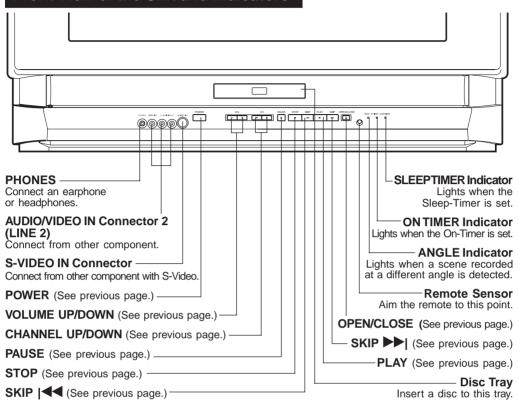
Remote Control Buttons (Light Tower™ Illuminated Remote Control)



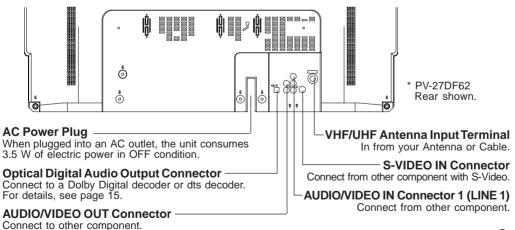
Note

• When LIGHT is pressed, (FM/TV, DVD, DSS/CABLE, CH UP/DOWN, VOL+/-) buttons will light for 5 seconds for easy location. If no button is pressed in 5 seconds the light goes out to conserve the batteries.

Front View of the Unit and Indicators



Rear View of the unit



Initial Setup (Ready to Play)

Please make all cable or antenna connections before powering on.

Connecting

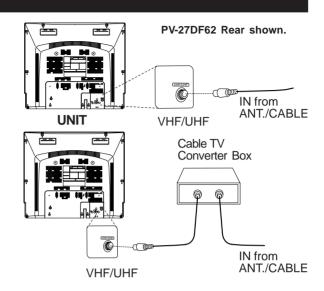
For ANT./Cable

Connect the cable from Antenna/Cable to the VHF/UHF terminal on the unit.

For DSS/Cable Box
Connect the OUT jack on your cable box to the VHF/
UHF terminal on the unit with a RF cable.

WARNING:

Overtightening "Nut type" RF coaxial cables may damage jacks. Finger tighten only.



Initial Setup (Ready to Play)

- Plug the unit power cord into an AC wall outlet.
- Press POWER* on the remote or unit. The unit comes on and auto channel and clock set starts.



 If you use a cable box, turn it on and set it to the Public Broadcasting Service (PBS) channel in your time zone. If you use a DSS receiver, it must be turned off.

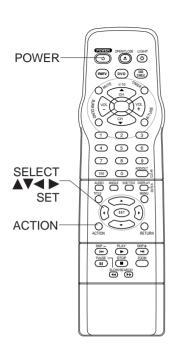


3 Settings are made automatically. When setup is done, this screen appears.



If AUTO CLOCK SET IS INCOMPLETE screen appears, set the clock using MANUAL CLOCK SET procedure on next page.





Manual Clock Set

If AUTO CLOCK SET was incomplete, manually set the clock as follows.

Press ACTION on the Remote to display SET CLOCK Menu screen.



Press ▲▼ to select the month and press SET to set. In the same manner, select and set the date, year, time, and DST.



3 Press ACTION twice to start CLOCK and exit.

DST (Daylight Saving Time)-

Unit auto adjusts clock for DST (Daylight Saving Time.)

- Spring (First Sunday in April) DST: ON ->Sets clock ahead one hour.
- Autumn (Last Sunday in October)

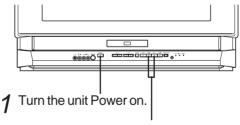
 DST: ON ->Turns clock back one hour.
- If your area does not observe Daylight Saving Time, select DST:OFF.

Note to CABLE System Installer

This reminder is provided to call the CABLE (Cable TV) System Installers attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

Reset all unit Memory Functions

When moving unit to a new location, or if a mistake was made in the Initial Setup section.



- Press and hold both PLAY and |◀◀ on the unit for more than 5 seconds.
 - The power will shut off.
- 3 Perform "Initial Setup" on page 10.

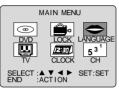
Reset Language, Channels, Clock,

MAIN MENU SELECT : ▲ ▼ ◀ ▶
END : ACTION

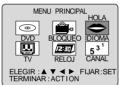
Press ACTION* to display MAIN MENU.

Language

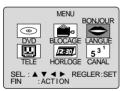
1) Press ▲▼◀▶ to select language icon.



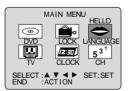
2) Press SET repeatedly.



For Spanish



For French

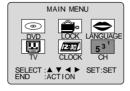


For English

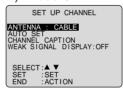
3) Press ACTION to exit.

Channels

 Press ▲▼◀▶ to select "CH."



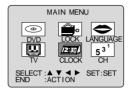
Press SET.



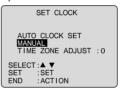
- Press ▲▼ to select "ANTENNA," then press SET to set vour antenna system ("TV" or "CABLE").
- 4) **Press ▲** ▼ to select "AUTO SET," then press SET.
- After Channel Auto Set is finished. Clock Auto Set will be performed. (If clock is set manually, Clock Auto Set will not be performed.)

Clock

 Press ▲▼◀▶ to select "CLOCK."



Press SET.



("TIME ZONE ADJUST" appears only when auto clock is set.)

 Press ▲▼ to select "MANUAL," then press SET.

(For Auto Clock Set, select "AUTO CLOCK SET," and press SET.)



<Example >

4) Press ▲▼ and press SET to select and set the month. date, year, time, and DST (Daylight Saving Time).

To Make Corrections, repeatedly press **◄** ► to move to error, then correct.

5) **Press ACTION** twice to start the clock and exit this mode.

Time Zone Adjust

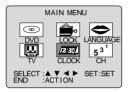
*Important:

If a remote control button does not work when pressed, press the FM/TV button on the remote and try the button again.

■ Time Zone Adjust

(Only when Auto Clock is set.)

1) **Press ▲▼**◀► to select "CLOCK."



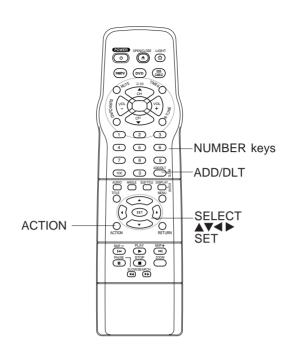
2) Press SET.



3) Press ▲▼ to select "TIME ZONE ADJUST" and press ◀ or ▶ to subtract or add hour(s) as necessary.



- 4) Press ACTION twice to exit.
- "TIME ZONE ADJUST" returns to "0" if clock is set manually.



Add or Delete a Channel

To add channel: Select channel with number keys and press ADD/DLT.

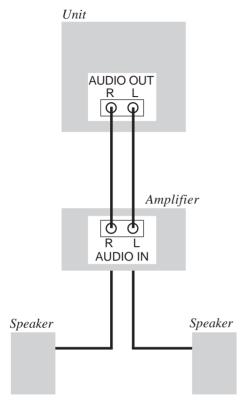
CHANNEL 08 ADDED

To delete channel: Select channel with CH ▲▼ or number keys and press ADD/DLT.

CHANNEL 08 DELETED

Audio Connections

■ Unit → Amplifier → Speaker



Manufactured under license from Dolby Laboratories. "Dolby", "Pro Logic" and the double-D symbol are trademarks of Dolby Laboratories. Confidential Unpublished Works. © 1992-1997 Dolby Laboratories, Inc. All rights reserved.

Ready Checklist

- ☐ Turn down the volume, then turn this unit, as well as other equipment to be connected, off before proceeding with connection.
- ☐ Do not block ventilation holes of any of the equipment and arrange them so that air can circulate freely.
- Read through the instructions before connecting other equipment.
- ☐ Ensure that you observe the color coding when connecting audio and video cables.

Enjoying digital audio output from the digital audio output connector

Notes on audio output from the optical digital audio output connector

Disc	Sound recording format	Optical digital audio output from connector
	Dolby Digital	Dolby Digital bitstream (1-5.1 ch) or OFF (no output)*1
DVD	Linear PCM (48/96 kHz 16/20/24 bit)	Linear PCM (2ch) (48 kHz sampling/16 bit only)*2 or no output*1
	dts	Bitstream or no output*1
Video CD	MPEG 1	PCM (44.1 kHz sampling)
CD	Linear PCM	Linear PCM (44.1 kHz sampling)
MP3	MP3	Linear PCM (It depends on the MP3 file)

- *1 The type of audio output from the connector can be selected by the Settings for DVD Operation. (See page 47.)
- *2 Sound having 96 kHz sampling is converted into 48 kHz sampling when it is output from the unit's optical digital audio output connector.

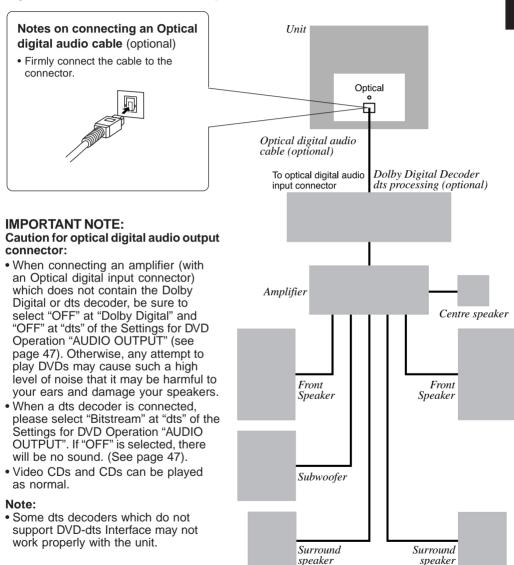
For your reference:

- Dolby Digital is a digital sound compression technique developed by the Dolby Laboratories Licensing Corporation. Supporting 5.1-channel surround sound, as well as stereo (2-channel) sound, this technique enables a large quantity of sound data to be efficiently recorded on a disc.
- Linear PCM is a signal recording format used in CDs. While CDs are recorded in 44.1 kHz/16 bit, DVDs are recorded in 48 kHz/16 bit up to 96 kHz/24 bit.
- If you have a Dolby Pro Logic Surround decoder, you
 will obtain the full benefit of Pro Logic from the same
 DVD movies that provide full 5.1 channel Dolby Digital
 soundtracks, as well as from titles with the Dolby
 Surround mark. For information on Panasonic or
 Technics Dolby Pro Logic Surround Sound Decoders
 please contact your local dealer.

Unit → Dolby Digital Decoder → Amplifier → Speaker or

Unit → dts (digital theater systems) Decoder → Amplifier → Speaker

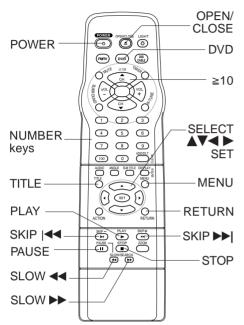
When DVDs recorded in Dolby Digital or dts are played, Dolby Digital bitstream or dts bitstream is output from the unit Optical digital audio output connector. When the unit is connected to a Dolby Digital decoder or dts decoder, you can enjoy theater-quality audio in your home. [An optical digital audio cable (optional) is required when an optional Dolby Digital decoder or dts decoder is used.]

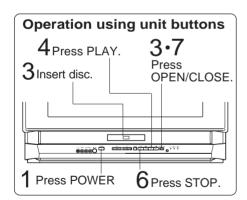


Basic DVD Operation

Ready Checklist

- ☐ All connections are made.
- ☐ Your unit is plugged in.
- If unit is connected to an audio amplifier, turn the stereo system's power on.



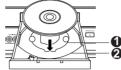


- *1 Interactive DVD... May include multiple camera angles, stories, etc.
- *2 Video CD with playback control... Particular scenes or information can be interactively selected from a menu that appears on the screen.

◆ Press POWER* on the remote or unit.

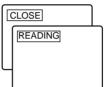
Insert a disc.

- If a disc is already inserted, go to step 3. (Depending on the disc, playback may start automatically.)
- 1) Press OPEN/CLOSE.
- 2) Place disc into disc tray.



 Hold disc by its edges only (page 7) with printed side up and use guides to place into tray. Use 1 3"(8 cm) or 2
 5" (12 cm) disc.

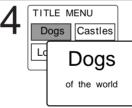
3 Press PLAY to start play. Disc tray closes automatically.



- You may also close the tray by pressing OPEN/CLOSE.
- Data reading time differs with each disc.

If an interactive DVD*1 or a Video CD with playback control*2 is used and a TITLE MENU appears, go to step 5.





Press ▲▼◀► or number key(s) (see below) to select title and press SET to play.

Using number key(s) starts play automatically.

<Example>

<Example>

1 digit number 1 digit number 12

1 ••• 1 12 ••• ≧10→1→2

3 digit number 123 •••100→1→2→3

Press SKIP ▶▶| or |◀◀ to go to next or previous menu screen.

SKIP function not available with all discs.
 Please refer to disc jacket for operation information.

To return to MENU (play stops)
Press TITLE, MENU, or RETURN. (DVD)
Press RETURN. (Video CD)

5 Press STOP to stop play.

Press OPEN/CLOSE to eject the disc.

■ Forward/Reverse rapid scene search

- → Press SLOW ►► or SLOW ◀◀ during play.
- → Press PLAY to release.
- Starting forward/reverse search during play started from menu on Video CDs may recall menu.
- Search speed, slow at first, increases with each additional press of the button up to 5 levels.

■ Forward/Reverse Chapter/Track Skip

→ Press SKIP ▶▶ or during play. Each press skips a chapter (DVD) or track (Video CD/CD).

Pressing

SKIP once midway through a chapter/track returns to start of that chapter/track. Each additional press skips back one chapter/track.

Pressing SKIP ►► or
 or
 during play started from menu on Video CDs may recall menu.

Current playback position



■ Still (Pause) Picture

- → Press PAUSE during play.
- → Press PLAY to release.
- DVD/Video CD: The unit will enter Still picture mode.
- CD: The unit will enter Pause mode.

■ Frame by Frame picture (DVD/Video CD)

- → Press PAUSE in Still mode.
- → Press PLAY to release.
- Each press advances picture one frame.
- Hold down for consecutive frame advance.
- Whether pictures are advanced by "FRAME" or "FIELD" is selected automatically (see page 48).

■ Slow Motion picture (DVD/Video CD)

- → Press SLOW ►► or SLOW ◀◀ in Still mode.
- → Press PLAY to release.
- Slow motion speed, slow at first, is increased with each additional press of the button up to 5 levels.
- Reverse slow motion is not available for video CDs.

 When appears on the screen while a button is being operated, it means that the corresponding operation is prohibited by the unit or the disc.

RESUME function

The unit memorizes the point where STOP is pressed (▶ flashes on screen).

Press PLAY to resume play from this point.

Pressing STOP again or opening the tray cancels RESUME, however, RESUME is not canceled when power is turned off and on.

 RESUME works only with discs for which elapsed play time is displayed during play.

Auto-Power Off function

Power turns off after unit has been in Stop mode (DVD) for about 5 minutes.

Enjoy Video CDs featuring playback control without using menus (Video CDs only)

- 1. Do steps 1-4 (previous page). When menu appears, **press STOP**.
- 2. Press number key(s) to select desired track (play begins).
 - Check disc for track numbers.
 - Press "1" to start at beginning of disc.

To Resume Menu use,

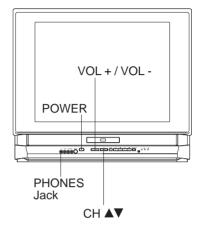
Press STOP, and press PLAY, then the menu appears. Now, go to step 5 (previous page).

Notes

- Please read the disc jacket for operation information.
- If a single sided disc is placed in upside down, "PLEASE CHECK THE DISC, AND FOR STAINS OR SCRATCHES ON DISC" is displayed.
- Remove disc and press unit POWER off when not in use.
- Disc continues to rotate with menu displayed even after play is done. Press STOP to clear menu display when finished with menu.

TV Operation

- Press POWER* on the remote or unit.
- Ready Checklist
- ☐ All connections are made.☐ Your unit is plugged in.
- 2 08 Use CH ▲▼ or number keys to select a channel.
- Press VOL + or VOL to adjust volume.



■ Using the 100 key

24 ||||||||

When selecting CABLE channels 100 to 125 with the number keys, first press the 100 key, and then enter the remaining two digits.

■ Rapid Tune

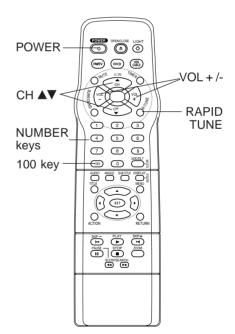
Press R-TUNE to display the last channel you were watching.

■ Audio Mute

Press MUTE to instantly mute the sound. Press again to restore the previous sound level.

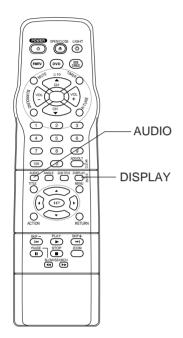
■ Phones

Connect an earphone (not supplied) or headphones (not supplied) to the Phones Jack.



MTS Broadcast/TV Stereo System

Equipped with dbx -TV Noise
Reduction for true MTS
reproduction. dbx -TV Noise
Reduction is required for good
stereo separation and audio fidelity.
dbx is a registered trademark, and
is licensed by dbx -Technology
Licensing.



Receivable Broadcast Types

The following are possible audio broadcast types and on-screen displays. The signal being received is indicated with an " (" mark while the selected audio mode is indicated with an arrow. To change the audio mode for these broadcasts, see the "Select Audio Mode for TV Viewing" section (below.)

Press DISPLAY to display the broadcast signal being received.



MTS Stereo and SAP broadcast Multi-channel Television Sound Stereo (main language) and Secondary Audio

Program (sub language) broadcasts are being received simultaneously. Select the STEREO or SAP audio mode.



MTS Stereo broadcast

Multi-channel Television Sound Stereo broadcast. Select STEREO audio mode.

 If stereo broadcast is weak and the display flickers, select MONO audio mode for possible improvement.



SAP broadcast

Secondary Audio Program (sub language).
Select SAP audio mode for the sub language.



MONO broadcast

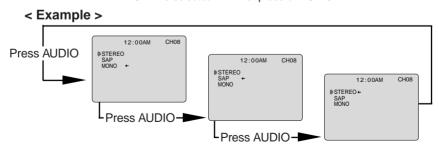
Normal monaural sound broadcast.

Audio Mode for TV Viewing

Press AUDIO to select the desired audio mode as described above.

(Arrow shows selection.)

- Each press of AUDIO will change the audio mode as shown below.
- "SAP" is selected with first press of AUDIO.



Closed Caption System

Closed Caption is ...

This multi-use system not only allows the hearing impaired to enjoy selected programs, but also makes useful information from TV stations available to everyone.

Closed Caption Mode Feature

Press ACTION* to display MAIN MENU.

MAIN MENU

OVD

OVD

OVD

OVD

OVD

OVD

OVD

ANGUAGE

53¹
CLOCK
CH

SELECT:AV 4 SET:SET

END:ACTION

- 1) Press ▲▼◀► to select "TV."
- Press SET to display SET UP TV screen.

SET UP TV

CAPTION

INPUT SELECT : TUNER
SET UP VIDEO/AUDIO
FM ANTENNA : INT
REMOTE WARNING :

- 1) **Press ▲▼** to select "CAPTION".
- Press SET to display CAPTION screen.
- CAPTION

 CAPTION MODE: CAP C1
 CC ON MUTE: CAP C1
 SELECT: A V
 SET: SET
 END: ACTION

 TEXT C2

 CAPTION

 1) Press A V to select CAPTION MODE.
 2) Press SET
 repeatedly to select mode. (See right.)

5 Press ACTION three times to return to the normal screen.

- CAP C2 ◀

Closed Caption Mode Selections

Caption Mode: CAP C1 or C2 A narration of selected TV programs is displayed.

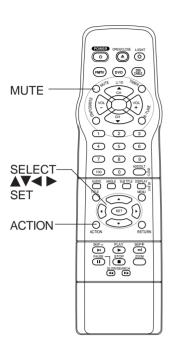
Check TV program listings for CC (Closed Caption) broadcasts.

Caption Mode: TEXT C1 or C2 Most of the screen will be blocked out. When the TV station broadcasts information, such as program listings, it will appear in this space.

Caption Mode: OFF Closed Caption /Text narration will not be displayed.

NOTE :

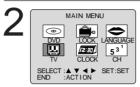
The closed caption or text signal may be broadcast over C1, C2, or both. Also, text contents can vary so you may wish to try different settings.



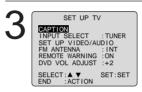
Caption On Mute Feature

Closed Caption narration, if available, is displayed when MUTE button is pressed for silence.

1 Press ACTION to display MAIN MENU.



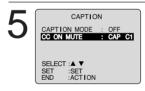
- 1) **Press ▲▼** ► to select "TV."
- 2) **Press SET** to display SET UP TV screen.



- Press ▲▼ to select "CAPTION".
- Press SET to display CAPTION screen.



- 1) Press ▲▼ to select CAPTION MODE.
- 2) Press SET repeatedly to select "OFF."



NO → CAP C1-

CAP C2◀

- Press ▲▼ to select CC ON MUTE.
- Press SET repeatedly to select desired mode.
- Each press of **SET** will change the display as shown left.

 The position may be
- The caption may be broadcast over CAP C1 or C2.



 When a disc supporting closed caption is used, the subtitle and the closed caption may overlap. In this case, turn the subtitle or caption on mute mode off. (See page 36.) 6 Press ACTION three times to return to the normal screen.

7 Press MUTE to mute the sound and display closed captioning.

• To cancel, press MUTE again.

TV Timer Features

ON-TIMER with Alarm

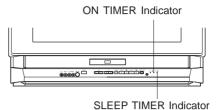
This unit can be set to automatically power on in one of 3 modes (TV, FM radio, or DVD/Video CD/CD.) You can also combine the On-Timer with a one minute alarm that gradually increases in volume.

Press TIMER* to display SET TIMER screen.

- Press ▲▼ to select "ON TIMER."
- Press SET to display ON TIMER screen.

Ready Checklist

☐ The clock is set to correct time.





- ON-TIMER mode selection order
- CH02—CH03·······CH125— CH01 FM1— DVD—FM9—FM8·····
- Press ▲▼ to select desired settings.
- 2) Press SET to set the ON-TIMER TIME or ON-TIMER mode.
- Make sure a disc is inserted if DVD (DVD/Video CD/CD) mode is selected.
- See "FM Radio" on pages 24 and 25 for instructions on how to preset FM stations.

Sleep Timer

This unit can be set for auto power off.

Press TIMER to display SET TIMER screen.



- 1) Press ▲▼
 to select
 SLEEP
 TIMER.
 2) Press SEI
- 2) Press SET repeatedly to select the desired time.

Press ▲▼ to select
ALARM "ON" or "OFF."

SLEEPTIMER 30→60→90→00

SHEGT AVARM: ON

SET SET BACK:

ON TIMER

When "ON" is selected,

an alarm will gradually increase in volume for one minute or until canceled by pressing any button (including VOL + -).

To Make Corrections.

use ▲▼ and ◀▶ to move back and correct.

To cancel, press SET repeatedly until 00 appears.

3 Press TIMER to return to the normal screen.

- Pressing DISPLAY with sleep timer set displays remaining time.
- SLEEP TIMER Indicator lights up on the unit.

• "ON TIMER SET" is displayed.

ON TIMER Indicator lights up on the unit.

To Cancel ON-TIMER,

Repeat steps 1 and 2. Then, press ADD/DLT to clear the time in step 3. Now, press TIMER to end. "ON TIMER END" briefly appears on-screen.

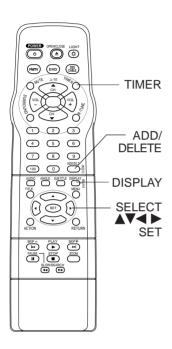
Note

 If no button on the remote or unit (including a button used to turn off the alarm) is pressed within 60 minutes after unit turns itself on, it will turn itself back off.

On-Screen Display (OSD)

*Important:

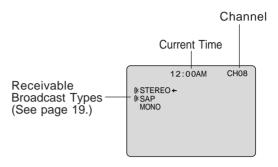
If a remote control button does not work when pressed, press the FM/TV button on the remote and try the button again.



TV Status & Clock Display

Press DISPLAY

to display or remove the overlay.

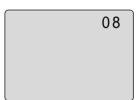


Blue Screen Display

Whenever the selected channel has no broadcast signal with the Weak Signal Display Feature set to "OFF" (see page 28), the screen will turn solid blue.

Channel Display

When you change channels, the channel number will be displayed.



FM Radio

FM Radio is ...

This unit has an FM radio with built-in antenna, 9 station preset, and a band range of 87.5 ~ 108.1 MHz. You can even set the On-Timer (page 22) to wake up to your favorite radio station.

FM Radio Setup

Press FM/TV on the remote to display FM radio mode.

2 12:00PM
FM 1 87.5MHz

Press a number key* (1~9) to select the FM preset number.

12:00PM

FM 1 87.7MHz

MEMORY:PRESS ADD/DLT KEY

12:00PM

FM 1 87.7MHz

MEMORIZED

To Make Corrections, select station with a number key, then do step 3 again.

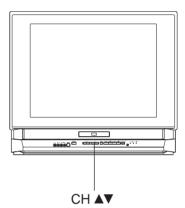
To exit FM mode, press FM/TV or DVD on the remote.

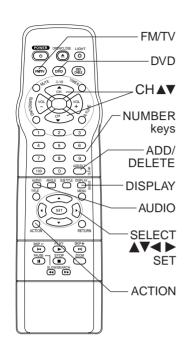
1) Press CH AV
to select the
desired radio
station. (Each
press changes
frequency by 200
KHz.)

2) Press ADD/DLT to set the radio station.

Hold down CH ▲ or ▼ for a few seconds, then release to quickly scan for FM stations in your area.

To cancel, press
 CH ▲ or ▼ while in search mode.

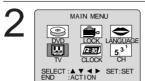




FM Antenna Setup

Make sure FM tuning is done correctly (see FM Radio Setup).

Press ACTION to display MAIN MENU.



- Press ▲▼◀▶
 to select "TV."
 Press SET
 to display SET
 UP TV screen.
- SET UP TV

 CAPTION
 INPUT SELECT : TUNER
 SET UP VIDEO/AUTO

 FM ANTENNA : INT
 REMOTE WARNING :ON
 DVD VTO LADJUST :+2

 SELECT: A V SET:SET
 END :ACTION
- 1) Press ▲▼ to select FM ANTENNA.
- 2) Press SET to select "INT (INTERNAL)" or "EXT (EXTERNAL)" to determine which one sounds best.
- → "INT"■ For antenna users→ "EXT"

For cable TV users

4 Press ACTION twice to end setup.

Audio Mode for FM Radio



Press AUDIO repeatedly to select "STEREO" or "MONO" in FM Radio mode.

Notes

- You may get better reception by repositioning the unit.
- You cannot select FM Radio mode while a blue back screen (ACTION, MENU) is displayed.
- Once stations are set, the selected station and current time are displayed when FM Radio mode is entered. To remove time, press DISPLAY.

Using FM Radio

Press FM/TV on the remote to display FM radio mode.



Press a number key (1~9) to select a preset FM number (see FM Radio Setup on page 24).

To exit FM mode, press FM/TV or DVD on the remote.

Cable Box Universal Remote Control Feature

Universal Remote Control is...

The Remote Control may be set up to control some basic DSS or Cable box functions.

The Universal Remote Control Setup

Find your DSS box or Cable box Brand Code Number from one of the charts on the next page.

2 Setup remote. Hold down DSS CABLE and press number keys to enter code.

- If code number is 100 or greater, e.g., press 1 0 2 for 102.
- Confirm code entry.

 Press POWER to turn selected unit ON or OFF.
 - See below for controllable functions in each mode.

Notes

- Please repeat the Universal Remote Control Setup after replacing remote control batteries.
- The remote control will not operate all DSS receivers or Cable Boxes made by the manufacturers listed.
 If you get no results, your particular brand cannot be controlled.

POWER-OPENCLUSE LIGHT FM/TV DVD -DSS -**CABLE** 4 5 6 7 8 9 (100 (D) ADDIDLT NUMBER AUDIO ANGLE SUBTITLE DISPLAY keys (1) SET (1) **ENTER** PAUSE STOP ZOOM SLOW/SEARCH

Using the Universal Remote Control (Available Buttons / Functions)

Once the remote control has been properly set up, you can select FM/TV, DVD, DSS or CABLE mode depending on which functions you wish to control.

Press FM/TV, DVD or DSS CABLE on the remote control to select the desired mode. (See below for buttons available in each mode.)

Set to FM/TV, DVD:

All TV. FM. and DVD functions.

Set to DSS CABLE:

 CABLE/DSS function, e.g. POWER, ENTER, NUMBER keys (except 100 key), CH UP/DOWN.

DSS Brand Code Numbers	
Hitachi/ Hughes	Optimus

Cable Box Brand Code Numbers

Cable box braild code Numbe	15
Hamlin	Oak Sigma
NEC 40, 19, 38, 32	Universal 52, 43, 44, 63, 42, 126
Novavision	Videoway
65, 66, 67, 68, 120, 106, 121, 122	Zenith
Oak 46, 11, 129, 101	I

Notes

- In DSS or CABLE mode, it may be necessary to press ENTER after pressing number keys for channel selection.
- In DSS or CABLE mode, POWER, CH Up/Down, Number Keys, ACTION, TIMER, DISPLAY/ENTER, SEARCH, SKIP+/-, R-TUNE, SELECT, SET, ZOOM, ANGLE, AUDIO, TITLE, SUB TITLE, MENU, or ADD/DLT/CLEAR are not available. Press FM/TV, DVD to use these functions.
- Depending on your DSS receiver or Cable box brand, some of the functions listed may not be remote controllable.
- Some DSS receiver or Cable box brands require you to turn on the power manually.
- Due to changes in infra-red commands used by manufacturers, some brands have several codes. If your unit does not respond to the first code, please try the next one.

Special Features

Remote Warning Feature

When Universal Remote Control (page 26) is used, and this feature is set to "ON," a warning appears whenever an invalid key is pressed in DSS or Cable mode.

Press ACTION* to display MAIN MENU.



- 1) Press ▲▼◀▶
 to select "TV."
- 2) Press SET to display SET UP TV screen.



- Press ▲▼ to select REMOTE WARNING.
- Press SET to set "ON" or "OFF."
- "REMOTE WARNING: OFF"
 - Remote warning will not appear even if invalid key is pressed.

4 Press ACTION twice to return to normal screen.

Selecting Input Mode

Method 1:

Press CH ▲▼. The display will change as follows.

LINE2

CABLE) (TV)

LINE1

LINE1

125 or 69

Method 2:

- a Press ACTION for MAIN MENU.
- b Press ▲▼◀► to select "TV", then press SET for SET UP TV screen.
- c Press ▲▼ to select "INPUT SELECT," and then press SET to select "TUNER," "LINE1," or "LINE2."
- d Press ACTION twice to exit this mode.

Auto Operation Functions

Auto Shut Off

No broadcast signal in TV mode (Only when Weak Signal Display is set to OFF.), DVD stops for 5 minutes

- → Power turns off
- This feature is canceled if any button is pressed during above conditions.

Weak Signal Display Feature

When "ON" is selected, the picture is displayed even when a broadcast signal is weak or non-existent.

Press ACTION to display MAIN MENU.



- Press ▲▼◀▶ to select "CH."
- 2) Press SET to display SET UP CHANNEL screen.

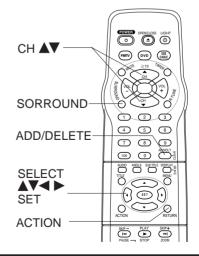


- Press ▲▼ to select WEAK SIGNAL DISPLAY.
- 2) **Press SET** to set "ON" or "OFF."

Notes

- "ON" = Picture is displayed regardless of signal condition, and may not always be clearly visible.
 - "OFF" = Screen turns solid blue when signal is absent or weak.
- If unit is connected to equipment which has blue back feature, selecting "ON" will have no effect on the other equipment.

4 Press ACTION twice to return to the normal screen.



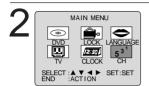
Channel Caption

Channel Caption is ...

Station names, e.g. ABC, CNN, etc. are set so they will appear when a channel is selected. Choose 24 preset names.

You need a list of stations and the channel numbers you receive them on.

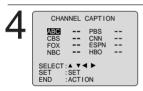
Press ACTION to display MAIN MENU.



- 1) Press ▲▼◀▶ to select "CH."
- Press SET to display SET UP CHANNEL screen.



- Press ▲▼ to select CHANNEL CAPTION.
- Press SET to display screen.





- 1) **Press ▲**▼ to select a station.
- 2) Press SET(or ►) to move cursor to the right.
- Press ▲▼ to select channel number.
- 4) Press SET (or ◀▶) to set preset captions.
- Repeat step 4
 until the Caption
 List is complete.

To Make Corrections Press ▲▼, then SET (or ▶)

to select channel number.

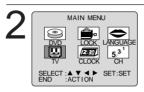
Press ▲▼ to change, or ADD/DLT to delete.

5 Press ACTION three times to end setup.

DVD Volume Adjust

Audio recorded on a DVD or Video CD often incorporates a dynamic range of sound. This means that, when compared to a music CD, etc., the average volume is generally lower and the peaks may be higher. This unit can be set so that the volume is increased automatically.

Press ACTION to display MAIN MENU.



- 1) Press ▲▼◀▶ to select "TV."
- 2) **Press SET** to display SET UP TV screen.



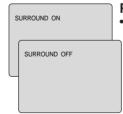
- Press ▲▼ to select DVD VOL ADJUST.
- 2) **Press SET** to set the level (0, +1, or +2).

4 Press ACTION twice to return to normal screen.

Surround Sound System

You can hear a deeper, 3-D sound effect using just the unit's two front speakers.

Set Surround sound.



Press SURROUND.

• "SURROUND ON" is displayed.

To Cancel, press SURROUND.

Notes

- Surround sound effect is not available for normal (mono) broadcasts.
- The surround effect (TV mode only) is not output to Audio Output L/R Connector.

Advanced Operation

V-Chip Control Feature

V-Chip Control Feature is...

This unit has a built-in V-Chip Control which allows vou to block unwanted TV usage based on US MOVIES and US TV PROGRAMS Ratings.

Process of V-Chip Control Feature Enter Code Setup Blocking

Enter Secret Code

A 4-digit code must be entered to view a blocked program or change rating settings.

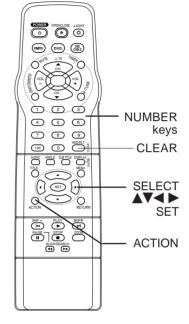
Press ACTION* to display MAIN MENU.



- 1) **Press ▲▼◆** to select "LOCK."
- 2) Press SET to display LOCK screen.

LOCK ENTER 4-DIGIT CODE **--BACK SPACE: ◀ ENTER :0-9 END :ACTION

- 1) Press number keys to enter your secret code.
- 2) Enter same code again for confirmation.
- Step 2) not necessary To Make Corrections when changing rating or Press ◀ repeatedly to secret code. move the cursor. Press number kevs to
 - Take care that you are not observed entering the secret code.



make the correction. LOCK CONFIRM 4-DIGIT CODE

RECOGNIZED
CHANGE CODE:ADD/DLT
CONTINUE:SET
END :ACTION

Press SET to display US Ratings menu (see pages 31, 32).

Or**Press ACTION** twice to exit.

Changing your secret code

• You will need your current code.

Do steps 1 ~ 3. In step 4, press CLEAR to clear current code.

Repeat steps 3 and 4 to enter new code.

Notes

- DO NOT forget your secret code.
- Once ratings are set, restricted programs cannot be accessed unless the secret code is entered.

Advanced Operation

If LOCK menu is not displayed, perform "Enter Secret Code" steps on page 30.

Process of V-Chip Control Feature Enter Code > Setup > Blocking

US MOVIES Ratings

LOCK US MOVIES CHANGE SETTINGS
US TV PROGRAMS :C
CHANGE SETTINGS DVD LOCK :OFF
CHANGE SETTINGS NEXT PAGE
SELECT: ★ ▼ SET: SET
END : ACTION

- 1) **Press ▲**▼ to select US MOVIES.
- 2) Press SET to set "ON" or "OFF."
- "ON" → V-Chip Control is activated.

·OFF

:OFF

■ "OFF" → V-Chip Control is deactivated.

Note

 "NEXT PAGE" displays CANADIAN V-Chip setting menu. Not necessary except when viewing Canadian discs or broadcasts.

LOCK CHANGE SETTINGS

TV PROGRAMS : OFF
CHANGE SETTINGS DVD LOCK CHANGE SETTINGS

NEXT PAGE
SELECT: ▲ ▼ SET: SET
END : ACTION

- 1) **Press ▲** ▼ to select CHANGE SETTINGS.
- 2) Press SET to display screen.



- 1) **Press ▲** ▼ to select VIEW NR PROGRAMS?.
- 2) Press SET to set "YES" or "NO."

NR (Not Rated) PROGRAMS

Some movies, such as old movies or foreign movies usually have no ratings.

VIEW NR PROGRAMS? : YES

G UNLOCKED

PG
PG-13 NC-17 GENERAL AUDIENCE
SELECT: A V SET: SET :ACT ION

- 1) **Press ▲** ▼ to select and **SET** to set ratings to be blocked. (See ratings chart on this page.)
- Press ACTION to redisplay LOCK menu and continue with US TV PROGRAMS Ratings Setup (page 32). Or, press ACTION four times to exit.

US MOVIES RATINGS

G **GENERAL AUDIENCE:** All ages admitted.

PG PARENTAL GUIDANCE: Some material may not be suitable for children.

PG-13 PARENTS CAUTIONED: Some material may be

inappropriate for children under 13.

R RESTRICTED: Children under 17 must be accompanied by a parent or adult.

OVER AGE 17 ONLY: NC-17 No one 17 and under admitted.

Χ ADULTS ONLY:

V-Chip Control Feature (continued)

If LOCK menu is not displayed, do "Enter Secret Code" steps on page 30.

US TV PROGRAMS Ratings



- 1) **Press ▲**▼* to select US TV PROGRAMS.
- 2) Press SET to set "ON" or "OFF."
- "ON" → V-Chip Control is activated.
- "OFF" → V-Chip Control is deactivated.

Note

• "NEXT PAGE" displays CANADIAN V-Chip setting menu. Not necessary except when viewing Canadian discs or broadcasts.



- 1) **Press ▲** ▼ to select CHANGE SETTINGS.
- 2) Press SET to display screen.



- 1) Press ▲▼ to select VIEW NR PROGRAMS?.
- 2) Press SET to set "YES" or "NO."

NR (Not Rated) PROGRAMS

Some TV shows, such as news, sports, weather, bulletins, emergency information usually have no ratings.



- 1) Press ▲▼ to select and SET to set ratings to be blocked. (See ratings charts on this page.)
- · Ratings highlighted in Green will be blocked. Ratings in white letters will not be blocked.

Process of V-Chip Control Feature

Enter Code | Setup | Blocking

US TV PROGRAMS RATINGS: Chart 1

TV-Y FOR ALL CHILDREN:

Content specifically geared to young viewers ages 2-6.

TV-Y7 FOR AGE 7 AND OLDER:

> May contain mild physical or comedic violence which may frighten children under 7.

TV-G **GENERAL AUDIENCE:**

Contains little or no violence, strong language, or sexual dialogue or situations.

TV-PG **PARENTAL GUIDANCE:**

May contain infrequent coarse language, limited violence, some suggestive sexual dialogue and situations.

TV-14 PARENTS CAUTIONED:

May contain sophisticated themes, sexual situations, strong language, and more intense violence.

TV-MA **MATURE AUDIENCE:**

> May contain mature themes, profane language, graphic violence, and sexual situations.

US TV PROGRAMS RATINGS: Chart 2

F\/ Fantasy Violence

V Violence

S Sexual Situations

L Adult Language

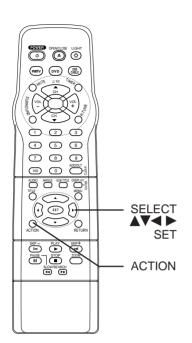
D Sexually Suggestive Dialogue

Note

You may select from standard TV ratings (chart 1), or customize to a specific content rating (chart 2).

to exit this mode.

Press ACTION four times





Blocking Message

<When V-Chip Control is activated>



 If a program or movie exceeds the ratings you have set, a message will appear on a black background and sound is muted.

To View a Blocked Program/Movie [Temporarily Deactivate V-Chip Control] Enter your secret code (ACCESS CODE) in the Blocking Message screen.

 V-Chip Control is reactivated when power is turned off or power failure occurs.

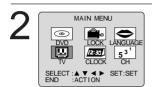
[Deactivate V-Chip Control]

Enter your secret code (steps 1-4 page 30). Then, set US MOVIES and/or US TV PROGRAMS to "OFF" using ▲▼ and SET. (Ratings set on pages 31, 32 is retained and will be in effect when V-Chip Control is activated again.)

This feature allows easy setting of picture and sound suitable for each program source.

Video Menu

Press ACTION* to display MAIN MENU.



- 1) Press ▲▼◀▶
 to select "TV."
- Press SET to display SET UP TV screen.



- Press ▲▼ to select "SET UP VIDEO/AUDIO."
- Press SET to display.

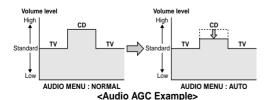


- 1) Press ▲▼ to select "VIDEO MENU."
- 2) Press SET repeatedly to select desired mode. (See below.)
- Press ACTION three times to end setup.

[Video Menu]

- **NORMAL**
 - Factory setting.
- MOVIE
 - Picture is adjusted for a movie-like feel.
- NIGH

Color and picture intensity are adjusted to be easier on the eyes for night viewing.



Audio Menu

a Do steps 1 - 3 left.



- Press ▲▼ to select "AUDIO MENU."
- 2) Press SET to select desired mode. (See below.)
- **C** Press ACTION three times to end setup.

[Audio Menu]

- **NORMAL**
- AUTO

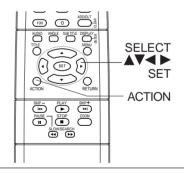
[Audio AGC (Auto Gain Control)]
The sound level is automatically adjusted to suit the program source (see below left).

- MOVIE
- Sound suited to movies.

 MUSIC
- Sound suited to music. (Factory setting)

 SPEECH

Sound suited to dialogue.



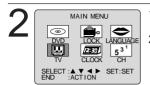
Notes

- The effects of this feature on the signal is not output to the Audio/Video Output Connector.
- When AUDIO MENU mode is "AUTO," the AUDIO ADJUST setting will be "STANDARD."
- · AUDIO MENU settings remain in memory.
- VIDEO MENU settings do not remain in memory.

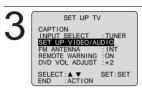
Video / Audio Adjustment

Video Adjustment

Press ACTION to display MAIN MENU.



- 1) Press ▲▼◀▶ to select "TV."
- Press SET to display SET UP TV screen.



- Press ▲▼ to select "SET UP VIDEO/AUDIO."
- Press SET to display.



VIDEO ADJUST

TINT

SHARPNESS

COLOR

- Press ▲▼ to select "VIDEO ADJUST."
- Press SET to display.
- 1) Press ▲▼ to select an item. (See below.)
 2) Press ◀▶ to

adiust.

To Reset VIDEO Controls.

SELECT: ▲ ▼
ADJUST: ◀ ▶
END : ACTION

Press ▲▼ and **SET** to select and set "STANDARD." All controls return to their factory settings.

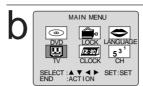


[VIDEO Adjustment]

- COLOR Control Adjust color intensity.
 - TINT Control
- Adjust for natural flesh tones.
- BRIGHTNESS Control Adjust picture brightness.
- PICTURE Control Adjust picture intensity by adjusting both contrast and color level in the proper balance.
- SHARPNESS Control Adjust picture sharpness.

Audio Adjustment

Press ACTION to display MAIN MENU.



- 1) Press ▲▼◀▶
 to select "TV."
- 2) Press SET to display SET UP TV screen.



- Press ▲▼ to select "SET UP VIDEO/AUDIO."
- Press SET to display.



- Press ▲▼ to select "AUDIO ADJUST."
- Press SET to display.



- Press ▲▼ to select an item. (See below.)
- Press ◀► to adjust.

To Reset AUDIO Controls.

Press ▲▼ and SET to select and set "STANDARD." All controls return to their factory settings.

Press ACTION four times to end setup.

[AUDIO Adjustment]

■ BASS Control

To adjust the intensity of low frequency sound.

■ TREBLE Control

To adjust the intensity of high frequency sound.

■ BALANCE Control

To adjust the (L/R) unit speaker output level.

 The levels set here do not affect other audio equipment when connected to the Audio Output L/R Connector.

Disc Operation

Subtitle Language (DVD only)

You can select a different subtitle language (if offered) than the one set at the Settings for DVD Operation. (See page 46.)

SUBTITLE: I ENGION



Press SUB TITLE*

in Play mode to display the subtitle selection on-screen.

- Display disappears after 5 seconds.
- · When no subtitles are offered. "-" will be displayed instead of the language number.

SUBTITLE: 3 ESP ON

- 1) Press ▲▼ to select desired language.
- 2) **Press** ► (or ◄) to set.
- 3) **Press ▲** (or **▼**) to select "ON" or "OFF."

Number of subtitle language being played back.

Notes

- When closed captioning is used along with subtitles, they may overlap. If so, turn one function off. (See pages 20 and 21.)
- If after several presses of the button the language does not change, language selection is not offered on the disc.
- Subtitles may not change to the selected language immediately.
- When power is turned on again or disc is removed, subtitles revert to initial setting language. If the initial language is not recorded on the disc, the disc's priority language will appear.

Audio Soundtrack Language (DVD only)

You can change the audio soundtrack language, selected at the Settings for DVD Operation, to a different language if available. (See page 46.) (This operation works only with discs on which multiple audio soundtrack languages are recorded.)





Press AUDIO in Play mode to display the audio selection on-screen.

 Display disappears after 5 seconds.

Audio attribute 1 type, sampling frequency, bit No. of the disc.



1) **Press ▲** ▼ to select desired language.

Number of the audio soundtrack language being played back.

Ready Checklist

Please read "Basic DVD Operation" on page 16.

[Subtitle language (No.)] [Audio soundtrack language (No.)]

ENG	English
FRA	French
DEU	German
ITA	Italian
ESP	Spanish
NLD	Dutch
SVE	Swedish
NOR	Norwegian
DAN	Danish
POR	Portuguese
RUS	Russian
JPN	Japanese
CHI	Chinese
KOR	Korean
MAL	Malay
VIE	Vietnamese
THA	Thai
*	Other

 Change the No. by pressing ▲▼. and press SET.

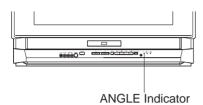
[Audio attribute 1 type, sampling frequency, bit No. of the disc (see page 47)]

	96KHz 16bit or 20bit 48KHz 24bit		
LPCM		20bit	Linear PCM disc
		24bit	
Dolby Digital	1ch - 5.1ch		Dolby Digital disc
dts	1ch - 5.1ch		dts disc

Notes

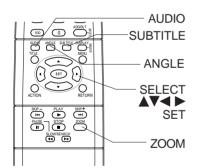
- If, after several presses of the AUDIO button the language does not change, language selection is not offered on the disc.
- When power is turned on again or disc is removed, language reverts to initial setting. If this language is not recorded on the disc, the language recorded will be heard.

When \bigcirc appears on the screen while a button is being pushed, it means that the corresponding operation is prohibited by the unit or the disc.



Notes

- ANGLE Indicator lights up on the unit when a scene recorded at different angles is detected.
- The angle number can be set beforehand so that the angle is switched whenever ANGLE Indicator lights up.



Notes

- Closed captioning will not be displayed while Picture Zoom is used. To see subtitles, set the subtitle feature to ON (see page 36).
- The subtitle cannot be enlarged nor can it's position be changed.
- The picture zoom feature does not work with a Video CD.
- During picture zoom, "ZOOM1" or "ZOOM2" is displayed on-screen.
- Zooming, on some discs, may result in poor picture quality, or may not operate at all.

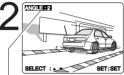
Multiple Angle Viewing (DVD only)

DVDs may contain scenes shot from multiple camera angles allowing the same scene to be viewed at different angles. You can view these angles, if available, using the ANGLE button.



Press ANGLE in Play mode to display the angle selection on-screen.

• Display disappears after 5 seconds.



Press ▲▼ to select the desired angle.

Number of angle being played back.

Vocal selection for Karaoke discs (DVD/Video CD)

Press AUDIO in Play mode to display the audio screen.



- 1) Press ▲▼ (or ◀►) to select as shown below.
- 2) Press ► (or ◄) to set. (DVD only)
- DVD Karaoke (1 vocal) VOCAL ON -- VOCAL OFF
- DVD Karaoke (2 vocals) VOCAL V1 + V2-VOCAL V1-VOCAL V2-VOCAL OFF
- Video CD
 LR → L → R
 T

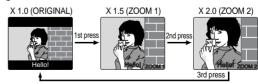
Picture Zoom (DVD only)

You can enlarge specific portions of a picture and select the zoom ratio using the ZOOM button on the remote during DVD playback.

Set Zoom size.

Press ZOOM repeatedly to change display as follows.

 You can enlarge the center portion of the image to one of 2 magnifications.



■ Use the A, V, < and > buttons to move the position up, down, left and right.

Disc Operation (continued)

Title menu (DVD only)

Some DVDs have more than one title, e.g. movies. If the disc offers a title menu, you can select the desired title number. (Operation may vary according to the disc.)

TITLE MENU

Dogs Castles

Lovers Birds

<Example>

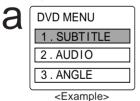
Press TITLE* in Play mode to display title screen.

- Pressing TITLE again resumes play from the scene when TITLE was first pressed.
- TITLE MENU
 Dogs Castles
 Lovers Birds
 of the world

 <Example>
- Press ▲▼◀▶ or number Key(s) to select a title.
- Press SET or PLAY to start play.
- Step 2) not necessary when using number key(s).

DVD menu (DVD only)

DVDs may offer a special menu. This menu may include guides to unique contents, audio/subtitle languages, etc. Although contents and operation may vary, the following steps show basic steps for using the menu.



Press MENU in Play mode to display DVD menu.

 Pressing MENU again resumes play from the scene when MENU was first pressed.

1) **Press ▲▼**◀ ▶ or

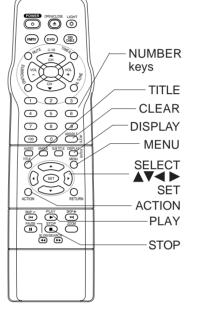
number kev(s)



to select an item.
2) Press SET or PLAY to access.

 Step 2) not necessary when using number key(s).

Repeat step "b" if there is more than one menu.



Program Play (Video CD/CD)

You can program specific tracks and order of play.

Press ACTION in Stop mode to display MAIN MENU.

- MAIN MENU

 MAIN MENU
- Press ▲▼◀▶ to select "DVD."
- Press SET to display screen.
- DVD MAIN MENU
 DISC LANGUAGES
 AUDIO OUTPUT
 STILL MODE :FIELD
 TV MODE :Letterbox

 SELECT :AY
 SET :SET
 END :ACTION
- Press ▲▼ to select "PLAY MODE."
- Press SET to display screen.
- PLAY MODE

 FROGRAMBLY

 RANDOM PLAY

 SELECT : A Y

 SET : SET
 END : ACTION
- Press ▲▼ to select "PROGRAMPLAY."
- Press SET to display screen.
- PROGRAM PLAY

 DISC PROGRAM

 6 11 16 58
 2 7 12 17 15 6
 3 8 13 19 1 13
 5 10 15 20 2

 CLEAR LAST
 CLEAR ALL
 SELECT
 SET
 END ACTION
- Press ▲▼◀▶ to select a track number. (Track numbers on disc are displayed.)
 Press SET to set.
- · Repeat step 5 to select another track.
- The selected track is added on the right side.
- PROGRAM PLAY
 DISC PROGRAM

 | 6 | 15 | 6 | 5 | 8 | |
 | 6 | 17 | 17 | 17 | 15 |
 | 3 | 8 | 13 | 18 | 1 | 13 |
 | 4 | 9 | 14 | 19 | 3 | 2 |
 | CLEAR LAST CLEAR ALL SCLEAT SET SET SET SET SHOWN ACTION
- 1) **Press △▼** ◆ to select "START."
- Press SET to start play of programs in the sequence selected.
- To cancel, press STOP during play, then press CLEAR.

Notes

- Up to 15 tracks can be programmed.
- "◄" or "▶" (depending on disc) indicates additional PROGRAM PLAY screen. Press ▲▼◄▶ for next or previous screen.
- To clear the last program one by one, Press ▲▼◀ ► to move to "CLEAR LAST" and press SET. (Pressing CLEAR also clears last program.)
- To clear all programs,
 Press ▲▼◀ ► to move to "CLEAR ALL" and press SET. (Programs are also cleared when the power is turned off or the disc is removed.)

Ready Checklist

- ☐ Unit is in TV mode, press FM/TV.
- ☐ Video CD or CD is inserted.

Program Repeat Play (Video CD/CD)

- **a** Do steps 1 through 6 on this page.
- Press DISPLAY to display
 Disc Information screen.
 (Disc Information Screen)



- Press DISPLAY again to display Unit Information screen.
- Press SET to enter Select mode. ("REPEAT OFF" will flash.)

(Unit Information Screen)



Press ▲▼ to select "DISC REPEAT."

(Unit Information Screen)



Press SET to set mode. ("DISC REPEAT" stops flashing.)
To cancel,
select "REPEAT OFF" in step e, then press SET.

Disc Operation (continued)

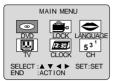
Random Play (Video CD/CD)

Tracks are played in a random order.

Press ACTION* in Stop mode to display MAIN MENU.

*Important: If a remote control button does not work when pressed, press the FM/TV button on the remote and try the button again.

2



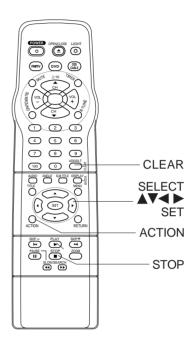
- 1) Press ▲▼◀▶ to select "DVD."
- Press SET to display screen.

DISC LANGUAGES AUDIO OUTPUT STILL MODE FIELD TO MODE LETTER ON THE PROPERTY OF
- Press ▲▼ to select "PLAY MODE."
- 2) **Press SET** to display screen.

PLAY MODE PROGRAM PLAY FANDOM PLAY

> SET ACTION

- 1) **Press ▲▼** to select "RANDOM PLAY."
- 2) **Press SET** to begin random play.
- To cancel, press STOP during play, then press CLEAR.



DVD Operation using On-Screen Displays

When DISPLAY is pressed, On-Screen Displays show disc information (title/chapter/track number, elapsed playing time) and unit information (repeat play, Play mode).

Press DISPLAY in Play or Stop mode to display "On-Screen Display."

• Each **press** of **DISPLAY** changes the on-screen display as follows. (Please refer to page 42 or 43.)

Selected disc information

V
Selected unit information

Normal Screen

Note

- DISPLAY button does not function while DVD TITLE MENU is displayed.
- 1) Press ▲▼ (or ◀►) to select an item.2) Press SET to set.
 - 1) **Press ▲▼** to select the setting.
 - 2) Press SET to set.

<Example of DVD>



- For some functions the setting will be registered immediately without pressing SET.
- When numbers are displayed (e.g. title number), the NUMBER keys are also available.

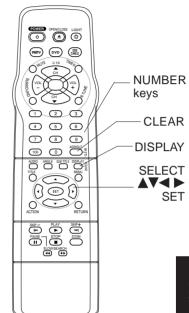
To make corrections, press ▲▼ and SET repeatedly to move to error, then correct.

 Pressing ► is effective for elapsing time instead of the above buttons. Press ◀ repeatedly to delete the error, then correct.

To return to the normal screen, press CLEAR or DISPLAY repeatedly.



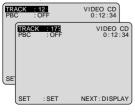
Unit is in DVD mode, press DVD.



Notes

- When DISPLAY is pressed during playback of a Video CD with Playback control, the NUMBER keys are not available on the displayed screen. In this case, press DISPLAY again to remove the displayed screen.
- When
 oppears on the screen
 while a button is being operated,
 it means that the corresponding
 operation is prohibited by the unit
 or the disc.

<Example of Video CD>



DVD Operation using On-Screen Displays (continued)

Detailed Descriptions of Each On-Screen Display

Disc information screen (for DVD)

1. TITLE No.

 Change the No. by pressing ▲▼* or the NUMBER keys, and press SET.

2. Chapter No.

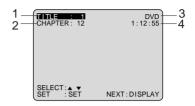
- Change the No. by pressing AV or the NUMBER keys, and press SET.
- 3. Disc currently being played

4. Elapsed playing time

The screen may be changed by selecting the elapsed time.

Change the elapsed time by pressing NUMBER keys, and press SET.
 (e.g.) 01:23:45 0 → 1 → 2 → 3 → 4 → 5

• This function does not work with some discs.



Disc information screen (for Video CD/CD)

A. Track No.

 Change the No. by pressing ▲▼ or the NUMBER keys, and press SET.

B. Playback control ON/OFF

[Video CD with playback control only]

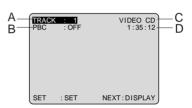
ON	Video CD menu play is displayed.
OFF	Video CD menu play is cleared.

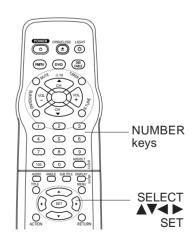
C. Disc currently being played

D. Elapsed playing time

Notes

- Track No. and elapsed playing time are not displayed during play started from menu of Video CDs with playback control.





Detailed Descriptions of Each On-Screen Display

Unit information screen

Change the desired mode during play by pressing ▲▼, and press SET.

a. Repeat Play

DVD	CHAPTER REPEAT	TITLE REPEAT	REPEAT OFF
Video CD/CD	TRACK REPEAT	DISC REPEAT	REPEAT OFF



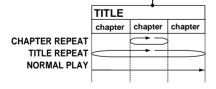
b. Play mode [Video CD/ CD only] (See page 39 or 40.)

PROGRAM PLAY	program play
RANDOM PLAY	random play
	normal play

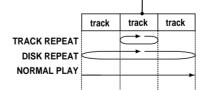


For your reference

CHAPTER/TITLE REPEAT PLAY (DVD)
 CURRENT PLAYBACK POSITION



TRACK/DISC REPEAT PLAY (Video CD/CD)
 CURRENT PLAYBACK POSITION

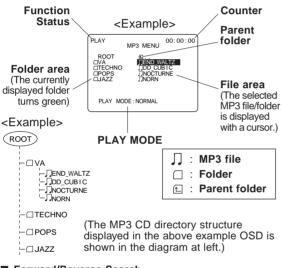


MP3 Playback Operation

MP3 Playback

You can use this unit to play MP3 format audio recorded for personal use with a computer etc. onto a CD-R or CD-RW. Play may not be possible in some cases due to the condition of the recording.

- Press POWER* on the remote or unit.
- Press OPEN/CLOSE. and then place a MP3 disc into the disc tray. Press OPEN/CLOSE to close.
- MP3 MENU is displayed and playback is started automatically. (The MP3 CD directory is displayed.)



- Forward/Reverse Search Press FF/SLOW+ or REW/SLOW- during play. Press PLAY to release.
 - · Search speed, slow at first, increases with each additional press of the button up to 4 levels.
- Forward/Reverse Track Skip Press SKIP ▶▶ or |◀◀ SKIP during play. Each press skips a track.
 - If pressed within first 3 seconds of playback, skips to the previous track. If over 3 seconds, returns to first track. (|◀◀ SKIP only.)
 - Only the SKIP ▶▶| or |◄◄ SKIP button can be used for track skip selection during playback. Put unit in Stop mode before performing folder/file selection (see above right.)
- Press STOP to stop playing.
- Press OPEN/CLOSE to eject the disc. The MP3 MENU is closed automatically.

- MP3 playback (During STOP mode)
 - 1) Press ▲▼ to select an MP3 file (□).
 - 2) Press SET or PLAY to start playback.
- Select folder (During STOP mode)
 - 1) Press ▲▼ to select a folder (□).
 - 2) Press SET to display files/folders contained in the folder.
- Select parent folder (During STOP mode)
 - 1) **Press ▲** ▼ to select a folder (᠒).
 - 2) Press SET to make changes to the previous directory display.

Note

- Folder area operation cannot be done. Only file area operation is possible.
- Select PLAY MODE (During STOP mode)
 - 1) Press ◀▶ to move cursor to PLAY MODE.
 - 2) Press ▲▼ to select the desired PLAY MODE (see below).

[PLAY MODE]

NORMAL:

All MP3 files are selected and played back one time only.

SINGLE REPEAT:

The selected MP3 file is played back repeatedly.

FOI DER REPEAT:

The MP3 files contained in the selected folder are played back repeatedly.

However, folders below the selected folder are not played back.

DISC REPEAT:

All MP3 files are played back repeatedly.

You can prevent playback of DVDs with a specific rating level which may be unsuitable for children.

• Some DVDs are encoded with a rating level. If the disc rating is higher (stricter) than the one you preset, playback will be prohibited.

Caution

Discs not encoded with a rating level will play even if the jacket states it is for mature audiences. For these discs, the DVD Lock Ratings will not work.

DVD Lock Ratings (DVD only)

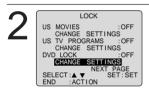
Perform DVD Lock setting in TV mode. Enter your secret code to display LOCK menu. (Perform "Enter Secret Code" steps on page 30.)

LOCK

US MOVIES : OFF
CHANGE SETTINGS
US TV PROGRAMS : OFF
CHANGE SETTINGS

DVD LOCK : OFF
CHANGE SETTINGS
NEXT PAGE
SELECT: X SET: SET
END : ACTION

- Press ▲▼ to select "DVD LOCK."
- Press SET to set "ON" or "OFF."
- "ON" → DVD Lock is activated.
- "OFF" → DVD Lock is deactivated.



- Press ▲▼ to select "CHANGE SETTINGS."
- Press SET to display screen.



- Press ▲▼◀► to select rating level.
- Press SET to select "LOCKED" or "UNLOCKED."

LEVEL 1: LOCK ALL:

Playback of all DVDs, CDs and Video CDs is prohibited. (Use to prohibit play of mature theme DVDs not encoded with a rating level.)

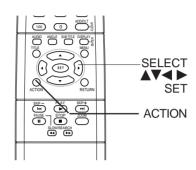
LEVEL 2: DVDs expressly for children can be played back. **LEVEL 3 to 7**:

DVDs for general audiences/children can be played back. (DVDs with mature content are prohibited.)

LEVEL 8 : NO LIMIT: (Factory preset)
All DVDs can be played back.

 Ratings which are highlighted in Green will be blocked; those not highlighted (white letters) will not be blocked.

Press ACTION three times to end setup.



<When DVD Lock is activated>



After DVD Lock is set and a blocked DVD is played, this message will appear. The message may differ depending on the disc.

To continue viewing a blocked program for now,

Press ▲▼ to select "YES" and SET. Then, enter your 4-digit secret code. When "NO" is selected, blocked programs cannot be viewed.

To change DVD LOCK settings

After entering your secret code in step 3 on page 30, select "OFF" to deactivate DVD Lock or change the rating level.

Settings for DVD Operation

Press ACTION* in Stop mode to display MAIN MENU.

MAIN MENU

DVD

DVD

DVC

DCCK LANGUAGE

53¹

TV CLOCK CH

SELECT :A ▼ ← ► SET:SET

FND :ACT ION

- 1) **Press ▲▼**◀► to select "DVD."
- Press SET to display screen.

- Press ▲▼ to select an item.
- 2) Press SET to set.

Once initial settings are done, they remain in memory (even after the power is off) until changed. This means the unit will always operate under the same conditions (especially DVDs) each time.

Ready Checklist

☐ Unit is in TV mode, press FM/TV.

DISC LANGUAGES (See below.)

Any languages offered on the disc can be set. If a language not offered is set, the original disc language will be selected.

AUDIO OUTPUT (See page 47.)

You can set the audio output that comes from the digital audio output terminal.

STILL MODE (See page 48.)

To select "FIELD" or "FRAME" to prevent jitter or to make small text or fine patterns clearly visible in a still picture. When "AUTO" is set, "FIELD" or "FRAME" is selected automatically.

TV MODE (See page 48.)

To select whether the video material for a wide-screen will be played back in Pan & Scan style or in Letterbox style.

DISC LANGUAGES (DVD only)

To select and set the language of the audio soundtrack, subtitles, or title/DVD menus for all discs to be played.

4



- 1) **Press ▲▼** to select "DISC LANGUAGES."
- Press SET to display screen.

5



- Press ▲▼ to select an item.
- 2) Press SET repeatedly for desired language. (Please refer right.)

Press ACTION to redisplay DVD menu and go to step 3 to setup another item. Or, press ACTION three times to exit.

"AUDIO" selections

To select the audio soundtrack language. (factory preset: English)
English/Spanish/French/Japanese
Original: Original disc language
OTHER ****: Other language selection*1

"SUBTITLE" selections

To select the subtitle language. (Factory preset: AUTO) AUTO: Same language selected for "AUDIO"

- If language set for "AUDIO" is used in playback, subtitles will not appear.
- If another language is used during playback, the subtitles will appear in the language selected at "AUDIO" setup.

English/Spanish/French/Japanese
OTHER ***: Other language selection*1

"MENUS" selections

(factory preset: English)
To select the language used in title menus or DVD menus.

English/Spanish/French/Japanese OTHER ***: Other language selection*1

To enter OTHER ★★★★ code number, Press number keys (Please refer to language codes on page 49).

To make corrections, press

repeatedly to delete language code number, and correct.

*1 If the selected language is not offered, the original disc language is selected.

AUDIO OUTPUT

Select the digital output to be output from the optical digital audio output connector of the unit.

Do steps 1 and 2 on page 46.

DVD MAIN MENU
DISC LANGUAGES
AUDIO OUT DU
STILL MODE
TV MODE

SELECT : A V
SET : SET
END : ACTION

- Press ▲▼ to select "AUDIO OUTPUT."
- 2) **Press SET** to display screen.

1	AUDIO OUTPUT
ડ	LPCM(DVD) : OFF Dolby Digital : Bitstream dts : OFF DRC : OFF SURROUND : OFF
	SELECT : A ▼ SET : SET END : ACTION

- Press ▲▼ to select an item.
- 2) **Press SET** repeatedly for output. (See below.)

■ "LPCM (DVD)" selections

OFF: Linear PCM of less than 48 kHz/16 bit is output. When playing DVDs recorded in linear PCM of over 48 kHz/20 bit or 96 kHz, no digital audio is output. (Factory preset)

PCM: When playing DVDs recorded in linear PCM of 48 kHz/20 bit/24 bit or 96 kHz, digital audio converted to 48 kHz/16 bit is output.
(Digital output of PCM audio is restricted to 48 kHz/16 bit or below for copyright protection.)

■ "Dolby Digital" selections

Bitstream: Dolby Digital bitstream (1ch-5.1ch) is

output. (Factory preset)

OFF: No output.

"dts" selections
Bitstream: dts bitstream is output. (Factory preset)

OFF: No output.

■ "DRC (Dynamic Range Compression)" selections OFF: Normal audio range is selected. (Factory preset)

For dynamic sound even at low volume, this is useful for late-night listening. [Dolby Digital DVDs

only].

■ "SURROUND" selections

Surround Sound creates the effect of sound coming from non-existent rear speakers even when only connected to a 2-channel stereo system.

OFF: No Surround Sound effect. (Factory preset)

ON: Surround Sound effect.

Press ACTION to redisplay DVD menu and go to step 2 to setup another item. Or, press ACTION three times to exit.

Type of emplifier	Recommended setting			
Type of amplifier to be connected	LPCM (DVD)	Dolby Digital	dts	
No amplifier is connected	OFF	OFF	OFF	
AV amplifier (with digital audio input connector) without Dolby Digital/dts decoder	PCM*1	OFF*2	OFF*2	
AV amplifier including Dolby Digital decoder	PCM*1	Bitstream	OFF	
AV amplifier including Dolby Digital/dts decoder	PCM*1	Bitstream	Bitstream*3	

- Make settings according to amplifier connected to optical audio output as shown in above table.
- When a dts decoder is not connected, to enjoy dts DVD, please select audio output other than dts on the dts DVD menu screen. Otherwise, there will be no sound from the unit speakers.
- *1 Audio output from unit is converted to 48 kHz/16 bit in addition to audio from digital audio output.
 - To enjoy high quality sound at 48 kHz/20 bit /24 bit or 96 kHz, connect the amplifier or decoder directly to the audio output connectors, not to the digital audio output connector. [Select "OFF" at the "LPCM (DVD)".]
- *2 When connecting an amplifier (with an optical digital input connector) which does not contain the Dolby Digital or dts decoder, be sure to select "OFF". If "Bitstream" is selected, starting DVD play may cause such a high level of noise as to be harmful to your ears and damage the speakers.
- *3 When a dts decoder is connected, please select "Bitstream" in "dts". If "OFF" is selected, there will be no sound

Notes

- Turn off other surround effects when using this surround effect.
- For optimum effect, the distance between the unit and the listener should be about 3 or 4 times the distance between the right and left front speakers.

Settings for DVD Operation (continued)

STILL MODE

Set to reduce jitter in a displayed still picture or a motion picture.

Do steps 1 and 2 on page 46.



- Press ▲▼* to select "STILL MODE."
- 2) **Press SET** repeatedly for mode. (See below)

AUTO: "FIELD" (Field still) or "FRAME" (Frame still) is

automatically selected during the still mode.

(Factory preset)

FIELD: "FIELD" (Field still) is always selected.

This setting will reduce jitter when compared with "AUTO" on some discs.

FRAME: "FRAME" (Frame still) is always selected.

Some texts and fine patterns will be seen clearly when compared with "AUTO" on some discs.

Press ACTION twice to exit this mode.

Selecting TV MODE

Set the screen display style for widescreen video material playback.

Q Do steps 1 and 2 on page 46.



- Press ▲▼ to select "TV MODE."
- 2) **Press SET** repeatedly for mode. (See below.)

Pan & Scan: (Factory preset)

- Widescreen video data is played in Pan & Scan style (left and right of screen is trimmed.)
- Video data not formatted in Pan & Scan will play in letterbox style.

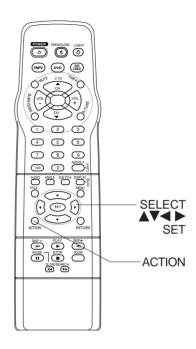
Letterbox:

Widescreen video data is played in Letterbox style (top and bottom of screen has black margin).

Press ACTION twice to exit this mode.

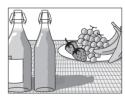
*Important:

If a remote control button does not work when pressed, press the DVD button on the remote and try the button again.

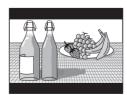


Example

• Pan & Scan (Factory preset)



Letterbox



Advanced Operation

Language Code List

Enter the appropriate code number for the initial settings "AUDIO", "SUBTITLE" and/or "MENUS" (see page 46).

Code	Language
6565	Afar
6566	Abkhazian
6570	Afrikaans
6577	Ameharic
6582	Arabic
6583	Assamese
6588	Aymara
6590	Azerbaijani
6665	Bashkir
6669	Byelorussian
6671	Bulgarian
6672	Bihari
6678	Bengali;Bangla
6679	Tibetan
6682	Breton
6765	Catalan
6779	Corsican
6783	Czech
6789	Welsh
6865	Danish
6869	German
6890	Bhutani
6976	Greek
6978	English
6979	Esperanto
6983	Spanish
6984	Estonian
6985	Basque
7065	Persian
7073	Finnish
7074	Fiji

Code	Language
7079	Faroese
7082	French
7089	Frisian
7165	Irish
7168	Scots Gaelic
7176	Galician
7178	Guarani
7185	Gujarati
7265	Hausa
7273	Hindi
7282	Croatian
7285	Hungarian
7289	Armenian
7365	Interlingua
7378	Indonesian
7383	Icelandic
7384	Italian
7387	Hebrew
7465	Japanese
7473	Yiddish
7487	Javanese
7565	Georgian
7575	Kazakh
7576	Greenlandic
7577	Cambodian
7578	Kannada
7579	Korean
7583	Kashmiri
7585	Kurdish
7589	Kirghiz
7665	Latin

Code	Language
7678	Lingala
7679	Laothian
7684	Lithuanian
7686	Latvian, Lettish
7771	Malagasy
7773	Maori
7775	Macedonian
7776	Malayalam
7778	Mongolian
7779	Moldavian
7782	Marathi
7783	Malay
7784	Maltese
7789	Burmese
7865	Nauru
7869	Nepali
7876	Dutch
7879	Norwegian
7982	Oriya
8065	Panjabi
8076	Polish
8083	Pashto, Pushto
8084	Portuguese
8185	Quechua
8277	Rhaeto-Romance
8279	Romanian
8285	Russian
8365	Sanskrit
8368	Sindhi
8372	Serbo-Croatian
8373	Singhalese

Code Language 8375 Slovak 8376 Slovenian 8377 Samoan 8378 Shona 8379 Somali 8381 Albanian 8382 Serbian 8385 Sundanese 8386 Swedish 8387 Swahili 8465 Tamil 8469 Telugu 8471 Tajik 8472 Thai 8473 Tigrinya 8475 Turkmen 8476 Tagalog 8479 Tonga 8482 Turkish 8484 Tatar 8487 Twi 8575 Ukrainian 8582 Urdu 8590 Uzbek 8673 Vietnamese 8679 Volapük 8779 Wolof 8872 Xhosa 8979 Yoruba 9072 Chinese		
8376 Slovenian 8377 Samoan 8378 Shona 8379 Somali 8381 Albanian 8382 Serbian 8385 Sundanese 8386 Swedish 8387 Swahili 8465 Tamil 8469 Telugu 8471 Tajik 8472 Thai 8473 Tigrinya 8475 Turkmen 8476 Tagalog 8479 Tonga 8479 Tonga 8482 Turkish 8484 Tatar 8487 Twi 8575 Ukrainian 8582 Urdu 8590 Uzbek 8673 Vietnamese 8679 Volapük 8779 Wolof 8872 Xhosa 8979 Yoruba 9072 Chinese	Code	Language
8377 Samoan 8378 Shona 8379 Somali 8381 Albanian 8382 Serbian 8385 Sundanese 8386 Swedish 8387 Swahili 8465 Tamil 8469 Telugu 8471 Tajik 8472 Thai 8473 Tigrinya 8475 Turkmen 8476 Tagalog 8479 Tonga 8482 Turkish 8484 Tatar 8487 Twi 8575 Ukrainian 8582 Urdu 8590 Uzbek 8673 Vietnamese 8679 Volapük 8779 Wolof 8872 Xhosa 8979 Yoruba 9072 Chinese	8375	Slovak
8378 Shona 8379 Somali 8381 Albanian 8382 Serbian 8385 Sundanese 8386 Swedish 8387 Swahili 8465 Tamil 8469 Telugu 8471 Tajik 8472 Thai 8473 Tigrinya 8475 Turkmen 8476 Tagalog 8479 Tonga 8482 Turkish 8484 Tatar 8487 Twi 8575 Ukrainian 8582 Urdu 8590 Uzbek 8673 Vietnamese 8679 Volapük 8779 Wolof 8872 Xhosa 8979 Yoruba 9072 Chinese	8376	Slovenian
8379 Somali 8381 Albanian 8382 Serbian 8385 Sundanese 8386 Swedish 8387 Swahili 8465 Tamil 8469 Telugu 8471 Tajik 8472 Thai 8473 Tigrinya 8475 Turkmen 8476 Tagalog 8479 Tonga 8482 Turkish 8484 Tatar 8487 Twi 8575 Ukrainian 8582 Urdu 8590 Uzbek 8673 Vietnamese 8679 Volapük 8779 Wolof 8872 Xhosa 8979 Yoruba 9072 Chinese	8377	Samoan
8381 Albanian 8382 Serbian 8385 Sundanese 8386 Swedish 8387 Swahili 8465 Tamil 8469 Telugu 8471 Tajik 8472 Thai 8473 Tigrinya 8475 Turkmen 8476 Tagalog 8479 Tonga 8482 Turkish 8484 Tatar 8487 Twi 8575 Ukrainian 8582 Urdu 8590 Uzbek 8673 Vietnamese 8679 Volapük 8779 Wolof 8872 Xhosa 8979 Yoruba 9072 Chinese	8378	Shona
8382 Serbian 8385 Sundanese 8386 Swedish 8387 Swahili 8465 Tamil 8469 Telugu 8471 Tajik 8472 Thai 8473 Tigrinya 8475 Turkmen 8476 Tagalog 8479 Tonga 8482 Turkish 8484 Tatar 8487 Twi 8575 Ukrainian 8582 Urdu 8590 Uzbek 8673 Vietnamese 8679 Volapük 8779 Wolof 8872 Xhosa 8979 Yoruba 9072 Chinese	8379	Somali
8385 Sundanese 8386 Swedish 8387 Swahili 8465 Tamil 8469 Telugu 8471 Tajik 8472 Thai 8473 Tigrinya 8475 Turkmen 8476 Tagalog 8479 Tonga 8482 Turkish 8484 Tatar 8487 Twi 8575 Ukrainian 8582 Urdu 8590 Uzbek 8673 Vietnamese 8679 Volapük 8779 Wolof 8872 Xhosa 8979 Yoruba 9072 Chinese	8381	Albanian
8386 Swedish 8387 Swahili 8465 Tamil 8469 Telugu 8471 Tajik 8472 Thai 8473 Tigrinya 8475 Turkmen 8476 Tagalog 8479 Tonga 8482 Turkish 8484 Tatar 8487 Twi 8575 Ukrainian 8582 Urdu 8590 Uzbek 8673 Vietnamese 8679 Volapük 8779 Wolof 8872 Xhosa 8979 Yoruba 9072 Chinese	8382	Serbian
8387 Swahili 8465 Tamil 8469 Telugu 8471 Tajik 8472 Thai 8473 Tigrinya 8475 Turkmen 8476 Tagalog 8479 Tonga 8482 Turkish 8484 Tatar 8487 Twi 8575 Ukrainian 8582 Urdu 8590 Uzbek 8673 Vietnamese 8679 Volapük 8779 Wolof 8872 Xhosa 8979 Yoruba 9072 Chinese	8385	Sundanese
8465 Tamil 8469 Telugu 8471 Tajik 8472 Thai 8473 Tigrinya 8475 Turkmen 8476 Tagalog 8479 Tonga 8482 Turkish 8484 Tatar 8487 Twi 8575 Ukrainian 8582 Urdu 8590 Uzbek 8673 Vietnamese 8679 Volapük 8779 Wolof 8872 Xhosa 8979 Yoruba 9072 Chinese	8386	Swedish
8469 Telugu 8471 Tajik 8472 Thai 8473 Tigrinya 8475 Turkmen 8476 Tagalog 8479 Tonga 8482 Turkish 8484 Tatar 8487 Twi 8575 Ukrainian 8582 Urdu 8590 Uzbek 8673 Vietnamese 8679 Volapük 8779 Wolof 8872 Xhosa 8979 Yoruba 9072 Chinese	8387	Swahili
8471 Tajik 8472 Thai 8473 Tigrinya 8475 Turkmen 8476 Tagalog 8479 Tonga 8482 Turkish 8484 Tatar 8487 Twi 8575 Ukrainian 8582 Urdu 8590 Uzbek 8673 Vietnamese 8679 Volapük 8779 Wolof 8872 Xhosa 8979 Yoruba 9072 Chinese	8465	Tamil
8472 Thai 8473 Tigrinya 8475 Turkmen 8476 Tagalog 8479 Tonga 8482 Turkish 8484 Tatar 8487 Twi 8575 Ukrainian 8582 Urdu 8590 Uzbek 8673 Vietnamese 8679 Volapük 8779 Wolof 8872 Xhosa 8979 Yoruba 9072 Chinese	8469	Telugu
8473 Tigrinya 8475 Turkmen 8476 Tagalog 8479 Tonga 8482 Turkish 8484 Tatar 8487 Twi 8575 Ukrainian 8582 Urdu 8590 Uzbek 8673 Vietnamese 8679 Volapük 8779 Wolof 8872 Xhosa 8979 Yoruba 9072 Chinese	8471	Tajik
8475 Turkmen 8476 Tagalog 8479 Tonga 8482 Turkish 8484 Tatar 8487 Twi 8575 Ukrainian 8582 Urdu 8590 Uzbek 8673 Vietnamese 8679 Volapük 8779 Wolof 8872 Xhosa 8979 Yoruba 9072 Chinese	8472	Thai
8476 Tagalog 8479 Tonga 8482 Turkish 8484 Tatar 8487 Twi 8575 Ukrainian 8582 Urdu 8590 Uzbek 8673 Vietnamese 8679 Volapük 8779 Wolof 8872 Xhosa 8979 Yoruba 9072 Chinese	8473	Tigrinya
8479 Tonga 8482 Turkish 8484 Tatar 8487 Twi 8575 Ukrainian 8582 Urdu 8590 Uzbek 8673 Vietnamese 8679 Volapük 8779 Wolof 8872 Xhosa 8979 Yoruba 9072 Chinese	8475	Turkmen
8482 Turkish 8484 Tatar 8487 Twi 8575 Ukrainian 8582 Urdu 8590 Uzbek 8673 Vietnamese 8679 Volapük 8779 Wolof 8872 Xhosa 8979 Yoruba 9072 Chinese	8476	Tagalog
8484 Tatar 8487 Twi 8575 Ukrainian 8582 Urdu 8590 Uzbek 8673 Vietnamese 8679 Volapük 8779 Wolof 8872 Xhosa 8979 Yoruba 9072 Chinese	8479	Tonga
8487 Twi 8575 Ukrainian 8582 Urdu 8590 Uzbek 8673 Vietnamese 8679 Volapük 8779 Wolof 8872 Xhosa 8979 Yoruba 9072 Chinese	8482	Turkish
8575 Ukrainian 8582 Urdu 8590 Uzbek 8673 Vietnamese 8679 Volapük 8779 Wolof 8872 Xhosa 8979 Yoruba 9072 Chinese	8484	Tatar
8582 Urdu 8590 Uzbek 8673 Vietnamese 8679 Volapük 8779 Wolof 8872 Xhosa 8979 Yoruba 9072 Chinese	8487	Twi
8590 Uzbek 8673 Vietnamese 8679 Volapük 8779 Wolof 8872 Xhosa 8979 Yoruba 9072 Chinese	8575	Ukrainian
8673 Vietnamese 8679 Volapük 8779 Wolof 8872 Xhosa 8979 Yoruba 9072 Chinese	8582	Urdu
8679 Volapük 8779 Wolof 8872 Xhosa 8979 Yoruba 9072 Chinese	8590	Uzbek
8779 Wolof 8872 Xhosa 8979 Yoruba 9072 Chinese	8673	Vietnamese
8872 Xhosa 8979 Yoruba 9072 Chinese	8679	Volapük
8979 Yoruba 9072 Chinese	8779	Wolof
9072 Chinese	8872	Xhosa
	8979	Yoruba
9085 Zulu	9072	Chinese
	9085	Zulu

Before Requesting Service

Check the following points once again if you are having trouble with your unit.

Power	Correction
No power	Completely insert Power Plug into an AC outlet. Set POWER button to ON.
Power turns itself off	Auto power-off (shutoff) occurs after about 5 min. in DVD mode with no operation, or if there is no broadcast signal in TV mode. Turn the power back on. (P. 17, 28)
Monitor	Correction
No picture or sound	Make sure your antenna system (TV or CABLE), is correctly set. (P. 10) Completely insert Power Plug into an AC outlet. Set POWER button to ON.
Poor picture with normal sound	Adjust BRIGHTNESS, SHARPNESS, and PICTURE controls in the SET UP Video Adjustment. (P. 35)
Poor sound with normal picture	Adjust VOLUME control. (P. 18)
Poor TV reception	Adjust SHARPNESS and PICTURE controls in the SET UP Video Adjustment. (P. 35)
No color or poor color	Adjust TINT and COLOR controls in the SET UP Video Adjustment. (P. 35)
Ghost (multiple) images	Install a directional antenna.
TV programs cannot be watched	Make sure the selected channel is in unit's memory. (P. 12)
Remote Control	Correction
Unit cannot be controlled	 Aim Remote directly at the remote sensor on the unit. (P. 9) Avoid any object blocking signal path. Inspect the remote batteries. (P. 4) Exposing unit remote sensor to direct fluorescent or outdoor light may cause signal interference.
ACTION, SELECT, SET, POWER, etc. buttons cannot be selected	 Press FM/TV for TV mode. (P. 26) Press DVD for DVD mode. (P. 26) Press FM/TV for FM mode. (P. 26) Check remote batteries.

If you cannot resolve the problem, please call the Customer Call Center for product assistance at 1-800-211-PANA (7262.)

To locate an authorized servicenter, please call toll free 1-800-211-PANA (7262.) or send e-mail to : consumerproducts@panasonic.com

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DVD/Video CD/CD	Correction
Play fails to start even when PLAY is pressed	 This unit cannot play discs other than DVDs, Video CDs and CDs. The disc may be dirty and require cleaning.
Play starts but then stops immediately	Be sure disc is installed with label side up.
Picture is distorted during rapid advance or rapid reverse	The picture will be somewhat distorted at times: this is normal.
No Forward/Reverse search play	Some discs may have sections which prohibit Forward/Reverse search. (P. 17)
Play does not start even when title is selected	Confirm the "DVD LOCK" setting. (P. 45)
Audio soundtrack and/or subtitle language is not the one selected at the initial settings	If the audio soundtrack and/or subtitle language selected at DVD initial settings does not exist on the disc, it will not be accessible.
No subtitles	 Subtitles appear only when available on disc. Select "ON" at the "Changing subtitle language" section (P. 36) to display subtitles.
Alternative audio soundtrack (or subtitle) language cannot be selected	 Alternative language cannot be selected with discs which do not contain more than one language. For some discs, alternative language cannot be selected with the AUDIO or SUB TITLE button. Try selecting it from the DVD menu if available.
Angle cannot be changed	This function is dependent on software availability. Even if disc has multiple angles, they may be recorded for specific scenes only (ANGLE Indicator on unit lights up). (P. 37)
Miscellaneous	Correction
The disc cannot be removed	 First, unplug unit. Then, prepare a rigid wire (e.g. an extended paper clip, etc.) and, applying moderate force, insert it straight into the hole at the base of the tray. The tray will eject a little. Now, pull the tray all the way out and remove the disc. (P. 6)

Warning and Instruction Displays

These displays will alert you of a missed operation or provide further instructions.

OSD	Caution	Page
PLEASE SET CLOCK BEFORE TIMER SETTING	If you attempt to set the On-Timer and the Clock is not set	12
PLEASE CHECK THE DISC, AND FOR STAINS OR SCRATCHES ON DISC	If you press PLAY, or the unit reads data from a stained or scratched disc in DVD mode. Also, if the type of disc is other than DVD, Video CD or CD	7

Limited Warranty

PANASONIC CONSUMER ELECTRONICS COMPANY, DIVISION OF MATSUSHITA ELECTRIC CORPORATION OF AMERICA One Panasonic Way Secaucus, New Jersey 07094 PANASONIC SALES COMPANY, DIVISION OF MATSUSHITA ELECTRIC OF PUERTO RICO, INC., AVE. 65 de Infantería, Km. 9.5 San Gabriel Industrial Park, Carolina, Puerto Rico 00985

Panasonic/Quasar Video Products Limited Warranty

Limited Warranty Coverage

If your product does not work properly because of a defect in materials or workmanship, Panasonic Consumer Electronics Company or Panasonic Sales Company (collectively referred to as "the warrantor") will, for the length of the period indicated on the chart below, which starts with the date of original purchase ("warranty period"), at its option either (a) repair your product with new or refurbished parts, or (b) replace it with a new or a refurbished product. The decision to repair or replace will be made by the warrantor.

Product	Parts	Labor	Service	Contact Number
Camcorder	One (1) Year (except CCD Image Sensor) CCD Image Sensor - 6 (Six) Months	Ninety (90) Days Ninety (90) Days	Carry-In or Mail-In	1-800-211-PANA(7262)
V /VCR Deck, A/V Mixer	One (1) Year	Ninety (90) Days	Carry-In or Mail-In	1-800-211-PANA(7262)
TV/VCR, TV/DVD, TV/DVD/VCR Combination	One (1) Year (except CRT) CRT - Two (2) Years	Ninety (90) Days Ninety (90) Days	Carry-In: 21" CRT and Smaller In-Home or Carry-In: 22" CRT and Larger	1-800-211-PANA(7262)
TV/HDR Combination	One (1) Year (except CRT) CRT - Two (2) Years	Ninety (90) Days Ninety (90) Days	In-Home or Carry-In	1-888-843-9788
Rechargeable Batteries (in exchange for defective item)	Ten (10) Days	Not Applicable	Carry-In or Mail-In	1-800-211-PANA(7262)
Tape (in exchange for defective item)	Five (5) Days	Not Applicable	Carry-In or Mail-In	1-800-211-PANA(7262)
Memory Cards (in exchange for defective item)	Ninety (90) Days	Not Applicable	Carry-In or Mail-In	1-800-211-PANA(7262)

During the "Labor" warranty period there will be no charge for labor. During the "Parts" warranty period, there will be no charge for parts. You must carry-in or mail-in your product or arrange for in-home service, as applicable, during the warranty period.

If non-rechargeable batteries are included, they are not warranted. This warranty only applies to products purchased and serviced in the United States or Puerto Rico. This warranty is extended only to the original purchaser of a new product which was not sold "as is". A purchase receipt or other proof of the original purchase date is required for warranty service.

Carry-In, Mail-in or In-Home Service

For Carry-In, Mail-In or In-Home Service (as applicable) in the United States call toll free contact number listed above or visit Panasonic Web Site: http://www.panasonic.com

For assistance in Puerto Rico call Panasonic Sales Company (787)-750-4300 or fax (787)-768-2910.

In-Home service, if applicable, requires clear, complete and easy access to the product by the authorized servicer and does not include removal or re-installation of an installed product. It is possible that certain in-home repairs will not be completed in-home, but will require that the product, or parts of the product, be removed for shop diagnosis and/or repair and then returned.

Limited Warranty Limits And Exclusions

This warranty ONLY COVERS failures due to defects in materials or workmanship, and DOES NOT COVER normal wear and tear or cosmetic damage, nor does it cover markings or retained images on the picture tube resulting from viewing fixed images (including, among other things, letterbox pictures on standard 4:3 screen TV's, or non-expanded standard 4:3 pictures on wide screen TV's, or onscreen data in a stationary and fixed location). The warranty ALSO DOES NOT COVER damages which occurred in shipment, or failures which are caused by products not supplied by the warrantor, or failures which result from accidents, misuse, abuse, neglect, mishandling, misapplication, alteration, faulty installation, set-up adjustments, misadjustment of consumer controls, improper maintenance, power line surge, lightning damage, modification, or commercial use (such as in a hotel, office, restaurant, or other business), rental use of the product, service by anyone other than a Factory Servicenter or other Authorized Servicer, or damage that is attributable to acts of God.

THERE ARE NO EXPRESS WARRANTIES EXCEPT AS LISTED UNDER "LIMITED WARRANTY COVERAGE". THE WARRANTOR IS NOT LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THIS PRODUCT, OR ARISING OUT OF ANY BREACH OF THIS WARRANTY. (As examples, this excludes damages for lost time, cost of having someone remove or re-install an installed unit if applicable, or travel to and from the servicer, loss of media or images, data or other memory or recorded content. The items listed are not exclusive, but are for illustration only.) ALL EXPRESS AND IMPLIED WARRANTIES, INCLUDING THE WARRANTY OF MERCHANTABILITY, ARE LIMITED TO THE PERIOD OF THE LIMITED WARRANTY.

Some states do not allow the exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the exclusions may not apply to you.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state. If a problem with this product develops during or after the warranty period, you may contact your dealer or Servicenter. If the problem is not handled to your satisfaction, then write to the warrantor's Consumer Affairs Department at the addresses listed for the warrantor.

PARTS AND SERVICE (INCLUDING COST OF AN IN-HOME SERVICE CALL, WHERE APPLICABLE) WHICH ARE NOT COVERED BY THIS LIMITED WARRANTY ARE YOUR RESPONSIBILITY.

Customer Services Directory

For Product Information, Operating Assistance, Literature Request, Dealer Locations, and all Customer Service inquiries please contact: 1-800-211-PANA (7262), Monday-Friday 9 am-9 pm; Saturday-Sunday 9 am-7 pm, EST.

or send e-mail: consumerproducts@panasonic.com

Web Site: http://www.panasonic.com You can purchase parts, accessories or locate your nearest servicenter by visiting our Web Site.

Accessory Purchases:

1-800-332-5368 (Customer Orders Only)
Panasonic Services Company 20421 84th Avenue South, Kent, WA 98032 (Monday-Friday 6 am-5 pm; Saturday 6 am-10:30 am, PST)
(Visa, MasterCard, Discover Card, American Express, Check)

Service in Puerto Rico

Matsushita Electric of Puerto Rico, Inc. Panasonic Sales Company/ Factory Servicenter: Ave. 65 de Infantería, Km. 9.5, San Gabriel Industrial Park, Carolina, Puerto Rico 00985 Phone (787)750-4300 Fax (787)768-2910

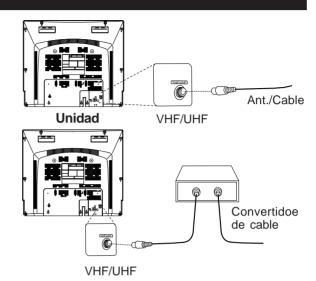
Spanish Quick Use Guide/Guía para rápida consulta

Conecte por favor todas las conexiones del cable o de la antena antes de turina potencia.

Conectando

Para Ant./Cable Conecte Ant./Cable a la entrada de antena de la TV (VHF/UHF).

Para Sistema Digital de Satelite (DSS)/Convertidor de cable Conecte la salida del convertidor de cable la "VFH/UHF" con el RF cable.



Realizando Configuración Inicial

- Tape el cable electrico de la unidad en el enchufe de pared de la CA.
- POWER de la prensa en el telecontrol o la unidad. La unidad se adelanta y comienzo auto del canal v del reloi.



PROCEEDING

CANCEL: PRESS STOP KEY

seleccione el Servicio Publico de Canales de Television (PBS) en su tiempo de su zona. Si

Si usa convertidor de cable, enciendala y horario de uso o utiliza receptor DSS este debe de estar AUTO CLOCK SET apagado.

Selecciones se realizaran automaticamente cuando la configuracion termine, la pantalla siquiente aparecera.

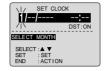


Si "AUTO CLOCK SET IS INCOMPLETE" aparece en pantalla, coloque el tiempo usando el procedimiento manual (MANUAL CLOCK SET). Vea el "Ajuste Manual del Reloj" en la proxima pagina.



Si el ajuste automático del reloj no se ha completado, ajuste el reloj manualmente de la siguiente manera.

- Presione la tecla ACTION en el control remoto para visualizar la pantalla del menú RELOJ.
- Presione ▲▼ para seleccionar el mes y SET para ajustar. De la misma forma, seleccione y ajuste la fecha, año, hora y DST (Hora de Verano).





Presione dos veces la tecla ACTION para poner el RELOJ en marcha y salir.

Ajustar de nuevo el reloj

- Presione ACTION para exhiba el menú.
- MAIN MENU

 MO LOCK LANGUAGE

 TV CLOOK 63 T

 V CLOOK 64 T

 SELECT : AV 4 SET: SET

Presione ▲▼◀▶ para seleccionar "RELOJ".

Presione SET.

SET CLOCK

AUTO CLOCK SET

MANUAL

TIME ZONE ADJUST : 0

SELECT: A V

SET : SET |
END : ACTION

Presione ▲▼ para seleccionar "MANUAL" y luego presione SET.

Presione ▲▼ y SET para seleccionar y ajustar la hora y la fecha.

5 Presione ACTION dos veces para <u>que el</u> reloj comience a funcionar y salir desde este modo.

Spanish Quick Use Guide/Guía para rápida consulta

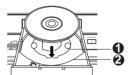
Operaciones básicas del DVD

◆ Presione POWER en el control remoto o el aparato.

Introducir un disco.

- 1) Presione OPEN/CLOSE.
 - 2) Ponga un disco en la bandeja de disco.
 - Sujete el disco sin tocar ninguna de sus superficies, póngalo con el lado donde esté impreso el título hacia arriba, alinéelo con las guías y póngalo en su posición apropiada.





2 Iniciar la reproducción

Presione PLAY.

La bandeja del disco se cierra automáticamente.

 Si está usando un DVD interactivo (Interactive DVD) o un Vídeo CD con contol de reproducción (playback control) y aparece un menú de títulos (TITLE MENU) en la pantalla, siga al paso 5.

Elija el artículo deseado.

- 1) Presione ▲▼◀▶ o las teclas numéricas.
- 2) Presione SET para la reproducción.
- Si usa las teclas numéricas, la reproducción comienza automáticamente.
- **5** Parar la reproducción. Presione STOP.
- 6 Expulsar el disco.
 Presione OPEN/CLOSE.

Para buscar una escena particular Búsqueda hacia adelante

Presione SLOW ▶▶ en el modo de reproducción. **Búsqueda hacia atrás**Presione SLOW ■ en el modo de reproducción.

Presione SLOW◀◀ en el modo de reproducción. (Para liberar, presione PLAY)

Para saltar un capítulo o una pista Salto hacia adelante

Presione SKIP ▶▶I en el modo de reproducción. Un capítulo (DVD) o una pista (Vídeo CD/CD) se salta cada ves que se oprime la tecla.

Salto hacia atrás

Presione I◀◀ SKIP en el modo de reproducción.

■ Para ver una imagen fija

Presione PAUSE durante la reproducción. (Para liberar, presione PLAY)

■ Para ver imágenes cuadro a cuadro (DVD/Vídeo CD)

Presione PAUSE én el modo de imagen fija. La imagen avanza un cuadro cada vez que presiona la tecla. (Para volver a la reproducción normal, presione PLAY.)

Para ver en cámara lenta (DVD/Vídeo CD)

Presione SLOW ►► o SLOW ← en el modo de imagen fija.
(Para liberar, presione PLAY)

Cambio del idioma de subtítulos [DVD solamente]

El idioma de los subtítulos seleccionado al hacer las fijaciones iniciales se puede cambiar por otro idioma diferente, si éste se encuentra disponible.



Presione SUBTITLE durante la reproducción.

 Cuando no haya subtítulos grabados, "-" se visualizará en lugar del número de idioma.



Seleccionar el idioma deseado.

- Presione ▲▼ para seleccionar idioma.
- 2) Presione ► (o ◄) para ajustar.
- 3) Presione ▲ (o ▼) para seleccionar "ACTIVO" o "INACTIVO."

Selección de vocal para los discos de Karaoke [DVD/Video CD]

Visualizar la pantalla AUDIO.

Presione AUDIO durante la reproducción.



Seleccionar el ajuste deseado.

- 1) Presione ▲▼ (o ◀ ▶) para seleccionar.
- 2) Presione ▶ (o ◄) para ajustar. (DVD solamente)
- DVD Karaoke (1 vocal)
 VOCAL ON→VOCAL OFF
- DVD Karaoke (2 vocales)
 VOCAL V1+V2→VOCAL→V1VOCAL V2→VOCAL OFF
- Video CD LR→L→R

Cambio del idioma de la pista de sonido [DVD solamente]

El idioma de la pista de sonido seleccionado al hacer las fijaciones iniciales se puede cambiar por otro idioma diferente, si éste se encuentra disponible.

1



Visualizar la pantalla AUDIO.

Presione AUDIO durante la reproducción.

2 8



Seleccionar el idioma deseado.

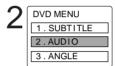
Presione ▲▼ para seleccionar idioma.

Utilización de un menu de DVD [DVD solamente]

Algunos discos DVD tienen estructuras únicas de menús llamadas menús DVD. Por ejemplo, los DVDs programados con un contenido complejo proporcionan menús guía, y los grabados con varios idiomas proporcionan menús para audio e idiomas de subtítulos. Aunque los contenidos de los menús DVD y la operación cambian de disco a disco, a continuación se explica la operación básica cuando se utiliza esta característica.

Presione MENU durante la reproducción.

El menú de DVD introducido en el disco se visualiza ahora.



Seleccionar el ítem deseado.

- 2) Presione SET o PLAY.

Utilización de un menú de títulos [DVD solamente]

Algunos discos con películas, por ejemplo, vienen con dos o más títulos. Si el disco tiene un menú de títulos grabados, el botón TITLE podrá utilizarse para seleccionar el título de la película.

Presione TITLE durante la reproducción.

Ahora se visualiza una lista de los títulos del disco.



Dogs

of the world

Seleccionar el título deseado.

- Presione ▲▼ ◀ ▶ o las teclas numéricas seleccionar.
- 2) Presione SET o PLAY.

For Your Information

Spanish Quick Use Guide/Guía para rápida consulta

Visión desde otro ángulo [DVD solamente]

Algunos discos DVD tienen escenas que han sido filmadas simultáneamente desde un número de ángulos diferentes. Con estos discos, la misma escena podrá verse desde cada uno de estos ángulos diferentes utilizando el botón ANGLE.



Visualizar la pantalla de ángulo.

Presione ANGLE durante la reproducción.



Seleccionar el ángulo deseado.

Presione **▲▼** para

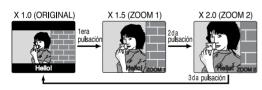
seleccionar.

Ampliación de la imagen [DVD solamente]

Durante la reproducción de un DVD, puede ampliar partes específicas de una imagen y seleccionar la relación de zoom usando el botón ZOOM del control remoto.

Seleccione el tamaño de la imagen.

Presione ZOOM repetidamente para cambiar el tamaño de la imagen como se indica a continuación:



- Use los botones y para desplazar la posición hacia arriba o hacia abaio.
- posición hacia la izquierda o hacia la derecha.

Funcionnamiento del DVD utilizando visualizaciones en pantalla

Cuando se presiona DISPLAY, la visualización en pantalla muestra la información del disco (título / capítulo / número de lista, tiempo transcurrido de reproducción, audio / idioma del subtítulo, y ángulo) e información (repetir la reproducción. modo reproducción, Karaoke vocal encendido / apagado, etc.).

- Visualizar Visualizaciones en pantalla. Presione DISPLAY en el modo reproducción o parada.
 - Cada vez que se presione DISPLAY. la visualización en pantalla cambia como se muestra a continuación.

Información seleccionada del disco Información seleccionada de la unidad Pantalla normal

Selección del ítem deseado

- 1) Presione ▲▼ (o ◀▶) para seleccionar.
 - 2) Presione SET para ajustar

<Eiemplo de DVD>



Selección del aiuste deseado

- 1) Presione ▲▼ para seleccionar.
- 2) Presione SET para aiustar.

<Ejemplo de Vídeo CD>



Para volver a la pantalla normal.

Presione repetidamente CLEAR o DISPLAY.

Puede usted programar pistas específicas y el orden de reproducción. • Vídeo CD o CD es insertado en el modeo DVD.

Visualizar MAIN MENU.

Presione ACTION en el modo parada.

MENU PRINCIPAL

DVO BCOOLEO DIDOMA

TV REDU CANAL

ELECIR: V & FIJAR:SET

TERMINAR: ACT TO FIJAR:SET

Vísualizar la pantalla DVD.

- 1) Presione ▲▼◀ ▶ para seleccionar "DVD."
- 2) Presione SET para visualizar.

DVD MENU PRINCIPAL

IDIOMAS DEL DISCO
SALIDA DE AUDIO
DETENER RASTREO: CAMPO
4.3 PREFERENCIA LA 110 DOX
1.3 DOTO DE DESCRIPTION
ELEGIR SET

Seleccionar "MODO DE REPRODUCCION."

- 1) Presione ▲▼ para seleccionar.
- 2) Presione SET para visualizar.

MODO DE REPRODUCCION
REPRODUCCION ALEATORIA

ELEGIR AFT
TERMINAR ACTION

Seleccionar "REPRODUCCION DE PROGRAMAS."

- 1) Presione ▲▼ para seleccionar.
- 2) Presione SET para visualizar.

REPRODUCCION DE PROGRAMAS

10 5100 PROGRAMA

11 5100 PROGRAMA

12 7 12 17 15 6

13 814 19 1 12

5 10 15 20 2

BORRAR EL ULTIMO
BORRAR TODO
ELECUR

ELECUR

ELECUR

SET ■

Seleccionar el número de la pista deseada. (Se visualizan los números de la pista del disco).

- 1) Presione ▲▼◀ ► para seleccionar.
- 2) Presione SET para seleccionar.
- Repita el paso 5 para seleccionar otra pista.
- La pista seleccionada se añade a la parte derecha.

REPRODUCCION DE PROGRAMAS

DISCO
PROGRAMA

OSCO
PROGRAMA

OSCO
PROGRAMA

OSCO
PROGRAMA

15 6
15 6
15 6
2 2
2
BORRAR EL ULTIMO
BORRAR TODO
ELEGIR
FLAR
FLAR
TERMINAR : AGTION

Comenzar "REPRODUCCION DE PROGRAMAS."

- 1) Presione ▲▼◀ ► para seleccionar "INICIAR."
- 2) Presione SET.
- La reproducción comienza en la secuencia programada.
- Para cancelar, pulsar STOP durante la reproducción y luego presione CLEAR.

Reproducción arbitraria [Vídeo CD/CD]

Las pistas se reproducen de forma arbitraria.

Repita los pasos 1-3 de la página anterior.

MODO DE REPRODUCCION
REPRODUCCION DE PROGRAMAS
REPRODUCCION ALFATORIA
ELEGIR AT
FLERE

Seleccionar "REPRODUCCION ALEATORIA."

- 1) Presione ▲▼ para seleccionar.
- 2) Presione SET.
- Comienza la reproducción arbitraria.
- Para cancelar, presione STOP durante la reproducción y luego presione CLEAR.

Spanish Quick Use Guide/Guía para rápida consulta

Fijaciones iniciales

Visualizar MAIN MENU.

Presione ACTION en el modo de parada.

Visualizar la pantalla DVD.

1) Presione ▲▼◀ ▶ para seleccionar.

2) Presione SET.

Seleccionar el artículo deseado.

1) Presione ▲▼ para seleccionar.

2) Presione SET.

IDIOMAS DEL DISCO

Todos los idiomas ofrecidos en el disco pueden ser ajustados, Si el idioma ajustado no es ofrecido en el disco, se seleccionará el idioma original del disco.

SALIDA DE AUDIO

Puede usted ajustar la salida audio procedente del terminal de salida audio digital.

DETENER RASTREO

Para seleccionar "CAMPO" o "CUADRO" para prevenir inestabilidad o para permitir ver textos pequeños o patrones finos claramente en el modo de imagen fija.

4:3 PREFERENCIA

Para seleccionar si el material del vídeo para pantalla ancha será vuelto a reproducir en el estilo Pan&Scan o en el estilo Letterbox en la pantalla.

Seleccionar el artículo deseado.

1) Presione ▲▼ para seleccionar.

2) Presione SET.

5 Volver a visualizar el menú de DVD para continuar el ajuste.

Presione ACTION y pase al paso 3 para ajustar otro ajuste o, para salir, presione ACTION tres veces.

Selección de IDIOMAS DEL DISCO [DVD solamente]

Seleccione "AUDIO"

Inglés / Español / Francés / Japón: (Fijación de fábrica : inglés)
Original : Se seleccionará el idioma original de cada disco.
OTRO **** : Se puede seleccionar el otro idioma.

Seleccione "SUBTITULO"

AUTO: Se seleccionará el mismo que fue seleccionado en la preparación de "AUDIO". (Fijación de fábrica)

 Si el idioma seleccionado en la preparación de "AUDIO" se utiliza durante la reproducción, los subtítulos no aparecerán.

 Si se utiliza otro idioma durante la reproducción, los subtítulos aparecerán en el idioma seleccionado en la preparación de "AUDIO"

Inglés / Español / Francés / Japón

OTRO **** : Se puede seleccionar el otro idioma.

Seleccione "MENU"

Inglés / Español / Francés : (Fijación de fábrica : inglés)

OTRO **** : Se puede seleccionar el otro idioma.

60

Por ayuda, llame al 1-800-211-PANA(7262) o envie e-mail : consumerproducts@panasonic.com

Selección de SALIDA DE AUDIO

Seleccione "LPCM(DVD)"

INACTIVO: Por el conector de salida de audio

digital solamente sale PCM lineal de

48 kHz/16 bits. Durante la

reproducción del DVD grabado en el PCM lineal de 48 kHz/20 bits o 96 kHz, no sale audio digital. (Fijación

de fábrica)

PCM: Durante la reproducción del DVD

grabado en el PCM lineal de 48 kHz/ 20 bits/24 bits o 96 kHz, sale audio digital convertido a 48 kHz/16 bits. (La salida digital de audio PCM está restringida a 48 kHz/16bits o menos para proteger los derechos de

autor.)

Seleccione "Dolby Digital"

Bitstream: Sale un flujo de bits Dolby digital (2ch-5.1ch). (Fijación de fábrica)

INACTIVO: No hay salida de audio.

Seleccione "dts"

Bitstream : Sale un flujo de bits dts. (Fijación de

fábrica)

INACTIVO: No hay salida de audio.

<u>Seleccione "DRC (Dynamic Range</u> Compression)"

INACTIVO: Se selecciona el margen de audio

normal.

(Fijación de fábrica)

ACTIVO: Seleccione este ajuste para disfrutar

de un sonido dinámico incluso a bajo volumen. Esto es muy útil para escuchar durante la noche. Esta función sólo se activa con

DVDs Dolby Digital.]

Seleccione "SURROUND"

El sonido envolvente crea el efecto de sonido que procede de altavoces que parecen ester en la parte de atrás aún cuando solo se ha conectado a un sistema estéreo de 2 canales.

INACTIVO: No efecto de sonido envolvente.

(Fijación de fábrica)

ACTIVO: Efecto de sonido envolvente.

Selección de DETENER RASTREO

AUTO: Durante el modo de imagen fija se

seleccionarán automáticamente "Campo fijo" o "Cuadro fijo" (Fijacion

de fabrica)

CAMPO: Seleccione este ajuste cuando

ocurra "distorsión" en las imagenes,

incluso cuando se haya seleccionado "AUTO".

CUADRO: "Cuadro fijo" es siempre

seleccionado. Seleccionar este ajuste cuando no se puedan ver claramente texto pequeño o patrones finos incluso cuando esté

seleccionado "AUTO".

Selección de 4: 3 PREFERENCIA

Pan&Scan: Datos de la pantalla ancha de vídeo son reproducidos en el estilo Pan &

Scan (la parte derecha e izquierda de la pantalla son recortadas).

(Fijación de fábrica)

 Datos de vídeo no formateados en Pan & Scan serán reproducidos en

el estilo letterbox.

Letterbox : Datos de la pantalla ancha de vídeo

son reproducidos en el estilo Letterbox (la parte de arriba y abajo de la pantalla tienen un margen

negro).

Index

	TV			
A	Accessories 4	L	Language	10, 12
	AC Power Plug9		LIGHT button	
	ACTION button 8, 12		Location of Controls	
	ADD / DLT button 8, 13	M	MTS Broadcast / TV Stereo System	19
	Audio Adjustment		MUTE button	
	Audio Auto Gain Control (AGC)	N	NUMBER keys	8. 18
	AUDIO button 8, 19, 25		100 Key	
	Audio Connections 14, 15	•	On-Screen Displays (OSD)	
	Audio Features		ON-TIMER Indicator	
	Audio Menu		ON-TIMER with Alarm	
	Audio Mode for TV Viewing		Outdoor Antenna Connections	
	Audio Mute	Р	Phones	18
	Audio / Video Input connector (LINE)	-	POWER button	
	Audio Output Connector (L/R)	Q	Quality Picture	,
_			Rapid Tune	
В	Batteries		R-TUNE button	
	Before Requesting Service 50, 51		Remote Control Buttons	
	Before Using		Remote Sensor	
	Blue Screen Display		Remote Warning Feature	
	Broadcast Types		Reset Language, Channels, Clock	
_	Cable Box Brand Code Number		Reset unit	
C	Cable Box Universal Remote Control Feature . 26	S	Safety Precautions	
	Caption On Mute		Secret Code	
	Channel		SELECT / SET button	
	Channel Caption		Sleep Timer	22
	CHANNEL UP / DOWN button		SLEEP TIMER Indicator	9, 22
	Clock		Spanish Quick Use Guide	54 ~ 61
	Closed Caption		Specifications	
	Code Numbers, DSS / Cable Box Brand 27		SURROUND button	-, -
	Connections 10		Surround Sound	
	Connections, Audio 14, 15	_	S-Video Input connector	
	Connections, DSS / Cable Box 10	Т	Table of Contents	
	Connections, Ant./Cable 10		Time Zone Adjust	
	Customer Services Directory 53		TV Operation	
D	DISPLAY / ENTER button 8, 23, 26		TV Status & Clock Display	
	DSS Brand Code Number		TV Timer Features	
	DSS CABLE button 8, 26	U	Unit, Front/Rear view	
	DSS / Cable Box Connections		Universal Remote Control	
_	DST (Daylight Saving Time) 11		US MOVIES Ratings	
F	FM Radio 24, 25	.,	US TV PROGRAMS Ratings	
	FM/TV button 8, 24 ~ 26	V	Video Adjustment	
	Front Panel Indicators		Video / Audio Menu	
	Function Display		Video / Audio Adjust	
ı	Important Safeguards and Precautions 2		Video Menu	
	Information (Unit, Disc) 6, 7		V-Chip Control Feature	
	Initial Setup 10		VHF / UHF Antenna Input Terminal	
	Indicators on the Front Panel 9		VOLUME UP / DOWN button	
	Input Mode	W	Warning and Instruction Displays	
			Warranty	
			Weak Signal Display Feature	28

DVD

Α	ANGLE button 8,	37
	ANGLE Indicator	37
	Auto-Power Off function	17
	AUDIO button 8,	36
	AUDIO OUTPUT	47
	Audio soundtrack language (DVD)	
В	Basic DVD Operation	16
С	CLEAR button 8, 39 ~	
D	Definition of terms	7
	Disc Audio Attribute 1 Type, Sampling	
	Frequency, Bit No	36
	Disc format	
	Disc handling	7
	Disc Information Screen	42
	DISC LANGUAGES (DVD)	
	Disc Operation	40
	Disc Tray	10
	DISPLAY button	43
	DVD button	
	DVD Lock Feature (DVD)	
	DVD Lock Ratings (DVD)	45
	DVD menu (DVD)	38
	DVD Operation using On-Screen 41 ~	43
	DVD Volume Adjust	29
F	FF button 8,	
	Foward / Reverse Chapter / Track skip	17
	Foward / Reverse rapid scene search	17
	Frame by Frame picture (DVD/Video CD)	17
K	Karaoke (DVD/Video CD)	37
L	Language Code List	49
М	MENU button 8,	
	MP3 Playback Operation	
	Multiple angle viewing (DVD)	37
0	OPEN / CLOSE button 8,	
_	Optical digital audio output connector 9,	15
Р	PAUSE button	
•	Picture Zoom (DVD)	
	Play	
	Playback control (Video CDs)	17
	PLAY button 8,	
	Program Play (Video CD/CD)	39
	Program Repeat Play (Video CD/CD)	39
R	Random Play (Video CD/CD)	
	Region number	3
	Repeat Play	43
	RESUME function	17
	RETURN button 8,	
	REW button 8,	16

Settings for DVD Operation	46 ~	48
SKIP ▶►I / I◀◀ button	8, 16,	17
Slow Motion (DVD/Video CD)		17
SLOW ▶▶ / ◀◀ button	8,	17
Still (Pause) Picture		17
Subtitle language (DVD)		36
TV MODE		48
Title menu (DVD)		38
Unit information screen (Unit)		43
ZOOM button	8.	37
	SKIP ▶I / I◀ button	Settings for DVD Operation 46 ~ SKIP ▶ I / I◀ button 8, 16, Slow Motion (DVD/Video CD)



1. Important safety notice

Components identified by the sign \uparrow have special characteristics important for safety. When replacing any of these components. Use only the specified parts.

Do not use the part number shown on this drawing for ordering.

The correct part number and part value is shown in the parts list, and may be slightly different or amended since this drawing was prepared.

3. Use only original replacement parts:

To maintain original function and reliability of repaired units, use only original replacement parts which are listed with their part numbers in the parts list section of the service manual.

- 4. Parts different in shape or size may be used. However, only interchangeable parts will be supplied as service replacement parts.
- 5. Test point information
 - ① :Test point with a jumper wire across a hole in P.C.B.
- :Test point with a component lead on the foil side.
 - ②: Test point with no test pin.
 - Test point with a test pin.

Schematic Diagram Notes

Indication for Zener Voltage of Zener Diodes
 The Zener Voltage of Zener Diodes are indicated as such on Schematic Diagrams.

Example:

(6.2V).....Zener Voltage

2. How to identify Connectors

Each connector is labeled with a Connector No. and Pin No. Indicating what it is connected to,

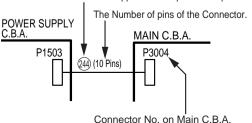
in other words, its counter part.

Use the interconnection schematic diagram to find the connection between associated connectors.

Example:

The connections between C.B.A.s are shown below.

Ref. No. of the connection parts such as lead cable, flexible cable which is supplied as a replacement parts.



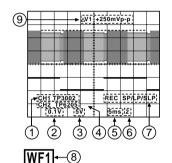
Parts marked "PT" are not used in any models included in this service model.

Example:
$$|\overline{C6011}| \frac{1}{1} | \overline{C6011}| \frac{1}{1} | R6097|$$

Jumper wires are used for WA10, WA5 etc and these are not supplied as replacement parts.

Signal Waveform Note

How to read Signal Waveform



- (1) Connecting Point
- 2 Volts/Div
- 3 Volts/Div
- 4 Connecting Point
- 5 Time/Div
- 6 Trigger Channel of the scope (1:CH1,2:CH2)
- Operation Mode of VCR
- 8 Waveform Point on Schematic
- ΔV1:Peak to Peak

Voltage Chart Note

Voltage Measurement

- a. Color bar signal in SP mode.
- b. ---: Unmeasurable or not necessary to measure.

Circuit Board Layout Note

Circuit Board Layout shows components installed for various models.

For proper parts content for the model you are servicing, please refer to the schematic diagram and parts list.

NOTE:

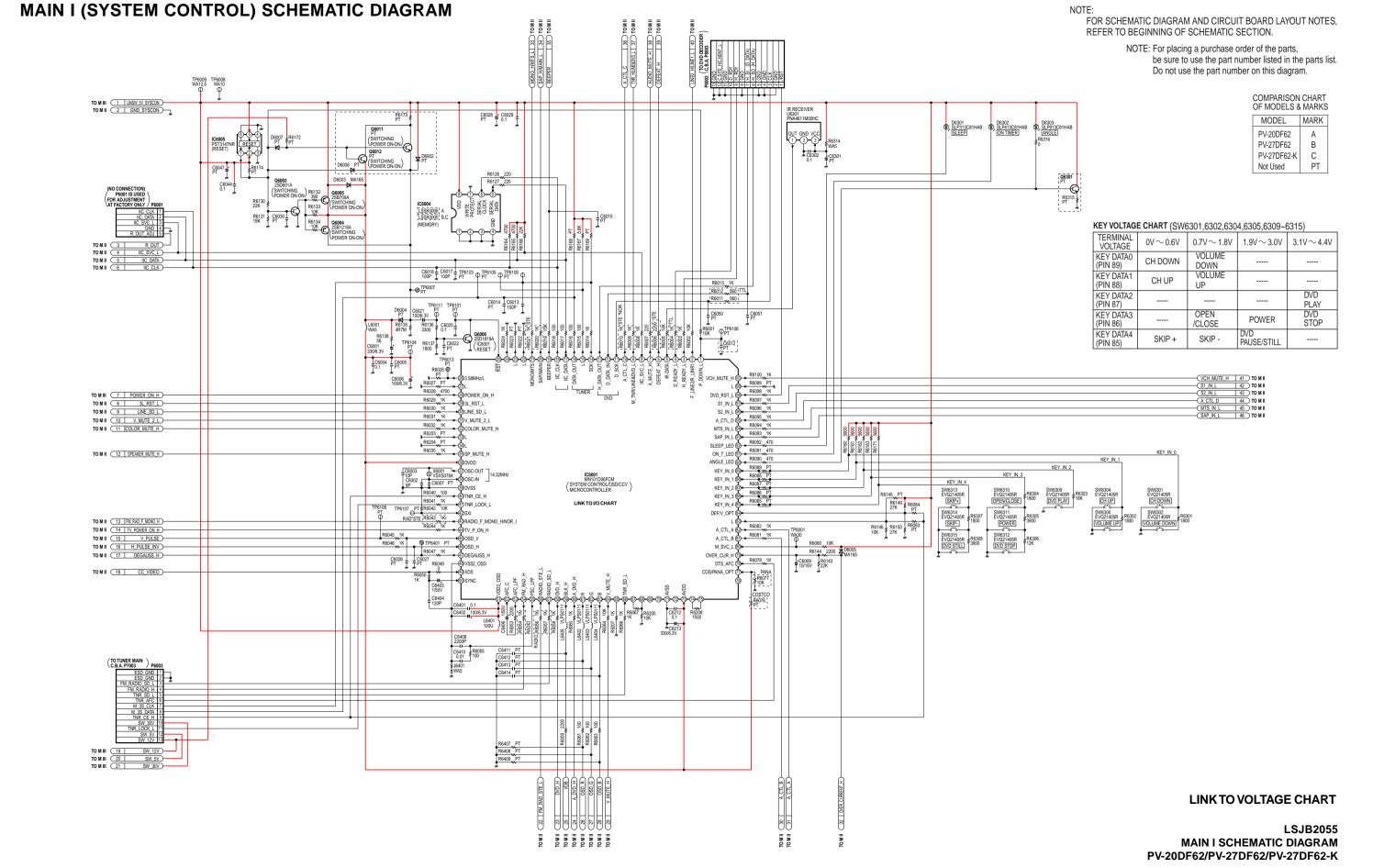
Circuit Board Layout includes components which are not used.

Model No. Identification Mark

COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-20DF62	Α
PV-27DF62	В
PV-27DF62-K	С
Not Used	PT

Note: Refer to item 3 of Schematic Diagram Notes for mark "PT".



I/O CHART OF IC6001

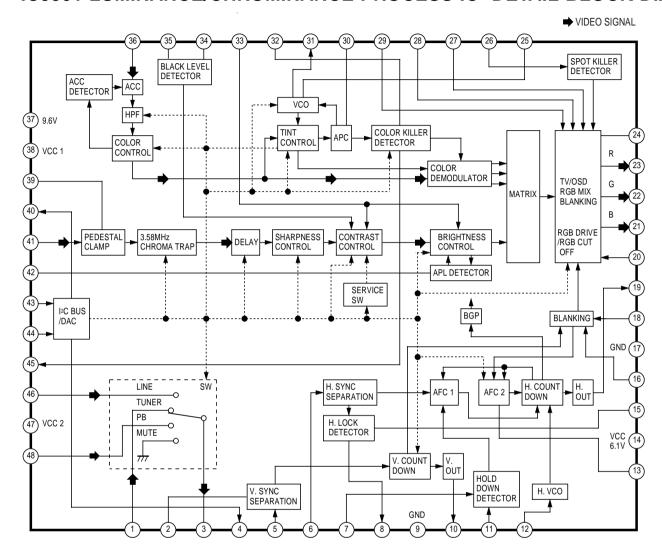
	_			_			
Pin No.		Signal Name	Description	Pin No.	_	Signal Name	Description
1	1	P_DOWN_L	POWER DOWN(L)	51	1	VDD2_OSD	VDD (+5V)
2	0		LINE2(H)/LINE1(L)	52	1	AFC_C	AFC
3	0	H_READY_L	HOST READY(L)	53	0	AFC_LPF	AFC
4	1	D_READY_L	DVD READY(L)	54	0	FM_RAD_H	FM RADIO(H)/TV(L)
5	1	IR-DATA	IR-DATA	55	-	FSC_LPF	(Not used)
6	0	DEFEAT_H	AUDIO DEFEAT(H)	56	1	FM_RAD_STE_L	FM RADIO STEREO(L)/MONO(H)
7	0	A_MUTE_H	AUDIO MUTE(H)	57	1	FM_RAD_SD_L	FM RADIO SIGNAL(L)
8	_	IIC_SVC_L	I2C SERVICE MODE(L)	58	0	DVD_H	DVD(H)
9	-	M_TNR_H/LINE&DVD_L	(Not used)	59	0	BLK_H	OSD BLANKING PULSE
10	0	A_CTL_C	FM RADIO&TUNER AUDIO(H)	60	0	A_DVD_H	AUDIO DVD(H)
11	1	D_SCK	DVD SERIAL CLOCK	61	0	R	OSD-R
12	1	D_DATA_IN	DVD SERIAL DATA 1	62	0	G	OSD-G
13	0	H_DATA_OUT	DVD SERIAL DATA 0	63	0	В	OSD-B
14	0	SCK	SERIAL CLOCK	64	0	V_MUTE_H	VIDEO MUTE1(H)
15	-	L	(Not used)	65	-	NC	(Not used)
16	0	DATA_OUT	SERIAL DATA 0	66	1	TNR_SD_L	TUNER SIGNAL(L))
17	I/O	IIC_DATA	I2C SERIAL DATA	67	-	NC	(Not used)
18	0	IIC_CLK	I2C SERIAL CLOCK	68	-	NC	(Not used)
19	I/O	BEEPER	BEEPER	69	-	NC	(Not used)
20	0	SAP/MAIN	SAP(H)/MAIN(L)	70	-	NC	(Not used)
21	0	MONO/MTS	MONO(H)/STEREO(L)	71	-	AVSS	Ground
22	-	L	(Not used)	72	-	NC	(Not used)
23	-	L	(Not used)	73	T	AVDD	VDD (+5V)
24	-	NC	(Not used)	74	-	NC	(Not used)
25	Ι	RST	RESET(L)	75	-	NC	(Not used)
26	0	3.58MHz/L	3.58MHz	76	-	NC	(Not used)
27	-	L	(Not used)	77	-	L	(Not used)
28	0	POWER_ON_H	POWER ON(H)	78	T	DTS AFC	AFC
29	0	3L RST L	IC5101 RESET(L)	79	T	OVER CUR H	OVER CURRENT(H)
30	Ι	LINE SD L	TV SIGNAL(L)	80	I	M SVC L	SERVICE(L)
31	0	V MUTE 2 L	VIDEO MUTE2(L)	81	0	A_CTL_B	LINE1&LINE2(H)
32	0	COLOR_MUTE_H	COLOR MUTE(H)	82		A CTL A	LINE2(H)
33	-	L	(Not used)	83	-	L	(Not used)
34	-	L	(Not used)	84	ī	DEF/V OPT	SWITCHING TERMINAL OPTION (IC451/IC481/IC751
35	0	SP MUTE H	AUDIO AMP MUTE(H)	85	Ī	KEY IN 4	KEY DATA 4
36	Ť	DVDD	VDD (+5V)	86	Ť	KEY_IN_3	KEY DATA 3
37	0	OSC OUT	OSC 2	87	Ī	KEY IN 2	KEY DATA 2
38	1	OSC_IN	OSC 1	88	Ī	KEY_IN_1	KEY DATA 1
39		DVSS	Ground	89	İ	KEY_IN_0	KEY DATAO
40	0	TNR CE H	TUNER CHIP ENABLE(H)	90	· ·	ANGLE_LED	ANGLE LED ON(L)
41	Ī	TNR_LOCK_L	TUNER LOCK SIGNAL(L)	91		ON_T_LED	ON-TIMER LED ON(L)
42	Ė	SXI	(Not used)	92	0	SLEEP_LED	SLEEP LED ON(L)
	1/0	FM_RAD_F_MONO_H/NOR_I	FM MONO(H)	93	Ī	SAP_IN_L	SAP SIGNAL(L)
44	0	TV_P_ON_H	TV POWER ON(H)	94	i	MTS_IN_L	MTS SIGNAL(L)
45	Ī	OSD V	V-SYNC	95	<u> </u>	A CTL D	FM AUDIO(H)/BEEPER(L)
46	Ė	OSD_H	H-SYNC	96	Ť	S2_IN_L	S-LINE2(L)
47	0	DEGAUSS H	DEGAUSS(H)	97	Ė	S1 IN L	S-LINE1(L)
48	-	VSS2 OSD	Ground	98	0	D_RST_L	DVD RESET(L)
49	H	XDS	VIDEO	99	Ĭ	L	(Not used)
50	H	CV_IN2	SYNC	100	0	VCH MUTE H	V-CHIP MUTE(H)
00		OT_11142	Ollio	100		+011_WUTL_II	T OTHE MICTERITY

MAIN II (TV Y/C PROCESS) SCHEMATIC DIAGRAM NOTE: FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES, REFER TO BEGINNING OF SCHEMATIC SECTION. COMPARISON CHART OF MODELS & MARKS ♣ AUDIO SIGNAL NOTE: For placing a purchase order of the parts, be sure to use the part number listed in the parts list. MODEL Do not use the part number on this diagram. PV-20DF62 PV-27DF62 PV-27DF62-K Not Used | CATION | CATION | PARTS | CATION | PARTS | CATION | PARTS | CATION | PARTS | CATION | PARTS | CATION | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS | PARTS 05302 2SD1819A BUFFER) R5304 D5304 R5302 39K MA165 22K F8309 R5303 180K 4700 | † † | R5516 47(0) Q5501 2581218A (BUFFER) R5518 2200 MA4047-M D5508 (4.7V) Q5353 2SD1819A (BUFFER) 3L_RST_L 8 TO M I 95155 PS164 PS164 PS165 100 727K PS165 PS161 PS165 PS161 PS165 PS1 D5005 AR5044 MA165 AR5044 TNR HLINE&DVD L 37 TO M I LINK TO VOLTAGE CHART

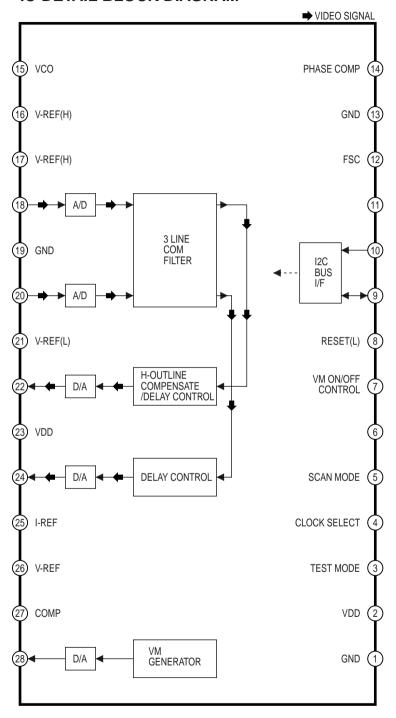
IM OT OT IM OT OT IM OT OT IM OT

000000000 MMMMMMMM LSJB2055 MAIN II SCHEMATIC DIAGRAM PV-20DF62/PV-27DF62-K

IC5301 LUMINANCE/CHROMINANCE PROCESS IC- DETAIL BLOCK DIAGRAM



IC5101 3LINE DIGITAL COMB FILTER IC-DETAIL BLOCK DIAGRAM



MAIN III (POWER SUPPLY) SCHEMATIC DIAGRAM

AUDIO SIGNAL

IMPORTANT SAFETY NOTICE: COMPONENTS IDENTIFIED BY THE SIGN A HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS,

USE ONLY THE SPECIFIED PARTS.

PARTS ENCLOSED IN DASHED LINES MARKED "PT" ARE NOT USED.

COMPARISON CHART

OF MODELS & MARKS

В

C PT

PV-20DF62

PV-27DF62

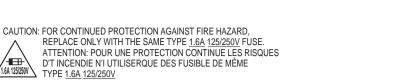
Not Used

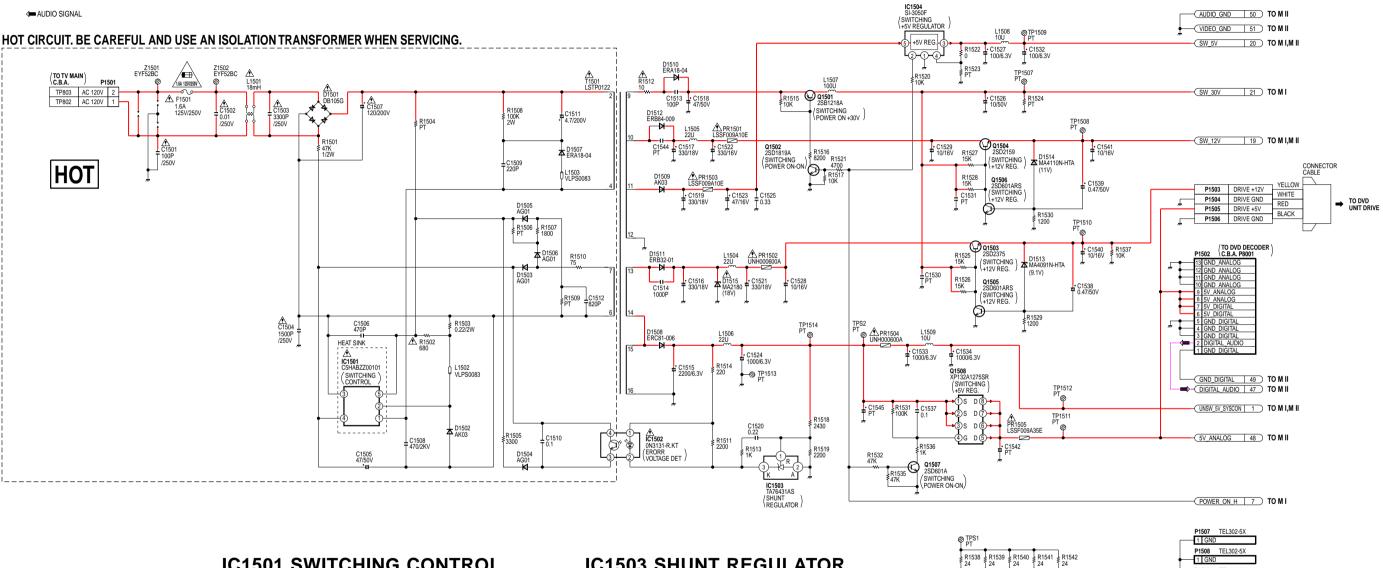
PV-27DF62-K

NOTE:

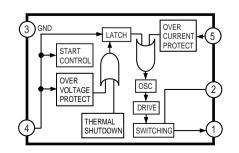
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES. REFER TO BEGINNING OF SCHEMATIC SECTION.

NOTE: For placing a purchase order of the parts, be sure to use the part number listed in the parts list. Do not use the part number on this diagram.

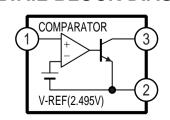




IC1501 SWITCHING CONTROL IC- DETAIL BLOCK DIAGRAM



IC1503 SHUNT REGULATOR IC- DETAIL BLOCK DIAGRAM

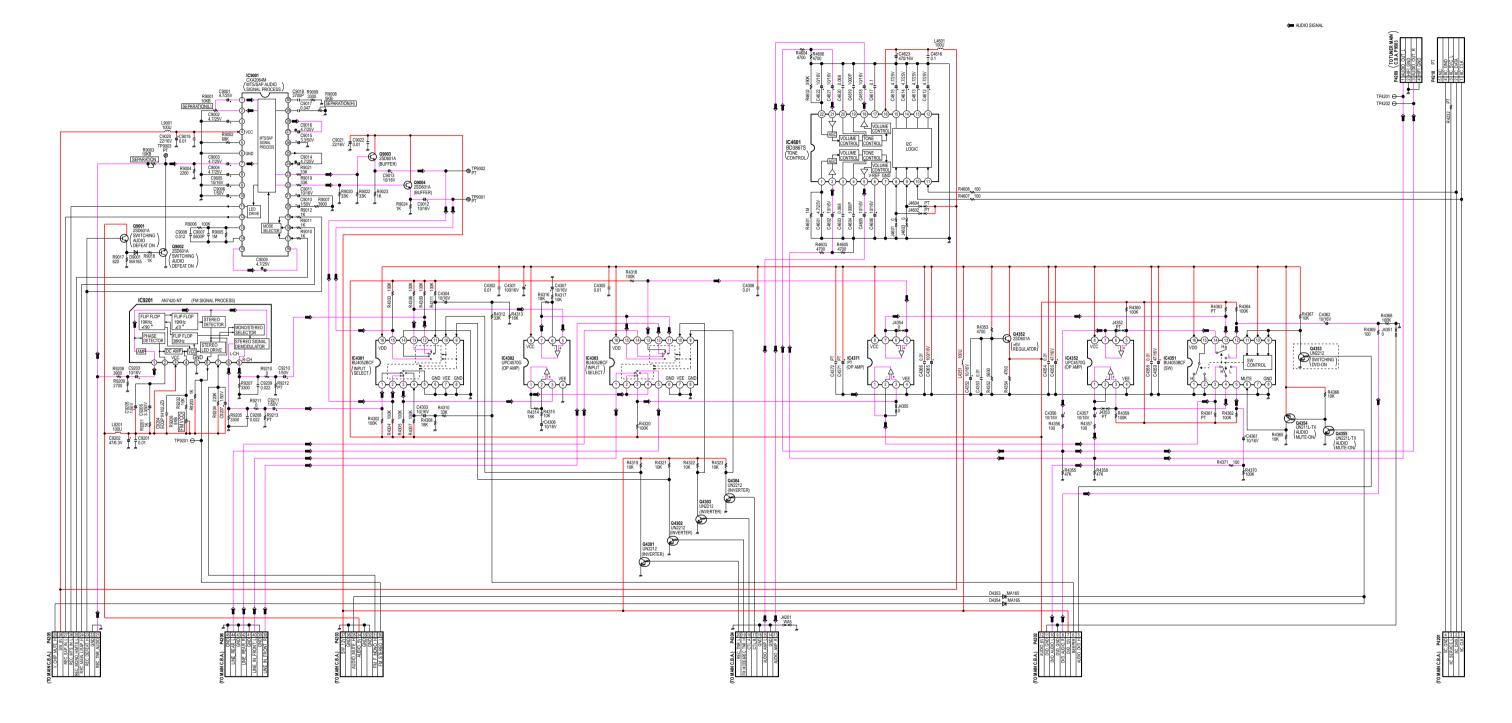




LINK TO VOLTAGE CHART

FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES, REFER TO BEGINNING OF SCHEMATIC SECTION.

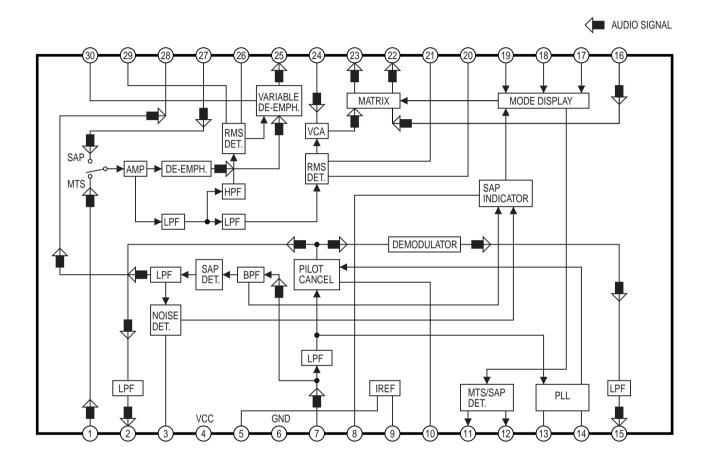
NOTE: For placing a purchase order of the parts, be sure to use the part number listed in the parts list. Do not use the part number on this diagram.



LINK TO VOLTAGE CHART

LSJB2029 AUDIO SCHEMATIC DIAGRAM PV-20DF62/PV-27DF62/PV-27DF62-K

IC9001 MTS/SAP AUDIO PROCESS IC- DETAIL BLOCK DIAGRAM



TUNER MAIN SCHEMATIC DIAGRAM NOTE: PARTS ENCLOSED IN DASHED LINES MARKED "PT" ARE NOT USED. (UHF/VHF TUNER/TV DEMODULATOR UNIT) B NC
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B AUDIO ® Macci ® BT ® BT ® CC ® BT ® DATA

DATA

DATA

PLOOK

PLOOK

PENIN NC GND GND GND GND PATTERN ANTENNA L7001 C7002 WA5 1000P C7011 2200P C7006 - - - -1000/6.3V R7003 1K R7002 1K 4 GND
3 AUDIO OUT R
2 GND
1 AUDIO_OUT L P7101 (TO MAIN C.B.A.) D9561 MA2C165001VT MA2C165001VT J9551 WA5 AUDIO OUT J9553 PT →→→ J9552 PT 100U AUDIO IN 1 (L) VIDEO IN 1 **††** | **†** L1603 J0JBC0000023 C9557 10/16V 11. C9552 T 100P S-VIDEO IN D9503 D9506 P MA4051-M D9507 M44051-M D9507 M44051-M D9507 M44051-M D9507 M44051-M M44051-M (TO MAIN C.B.A.) P4508 GND 1 AUDIO_AMP_L 2 AUDIO_AMP_R R4513 R4528 R4533 C4523 C4524 R4519 R4521 4.7 4.7 Q4505 PT SWITCHING DVD-ON (TO TV MAIN) P4506 AMP +B 1 (TO TV MAIN) P4507

AMP GND 1

PT **P4505** AMP_GND 1 NOTE:

FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES, REFER TO BEGINNING OF SCHEMATIC SECTION.

NOTE: For placing a purchase order of the parts, be sure to use the part number listed in the parts list. Do not use the part number on this diagram.

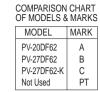
LINK TO VOLTAGE CHART

LSJB2057 TUNER MAIN SCHEMATIC DIAGRAM PV-20DF62/PV-27DF62/PV-27DF62-K

FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES, REFER TO BEGINNING OF SCHEMATIC SECTION.

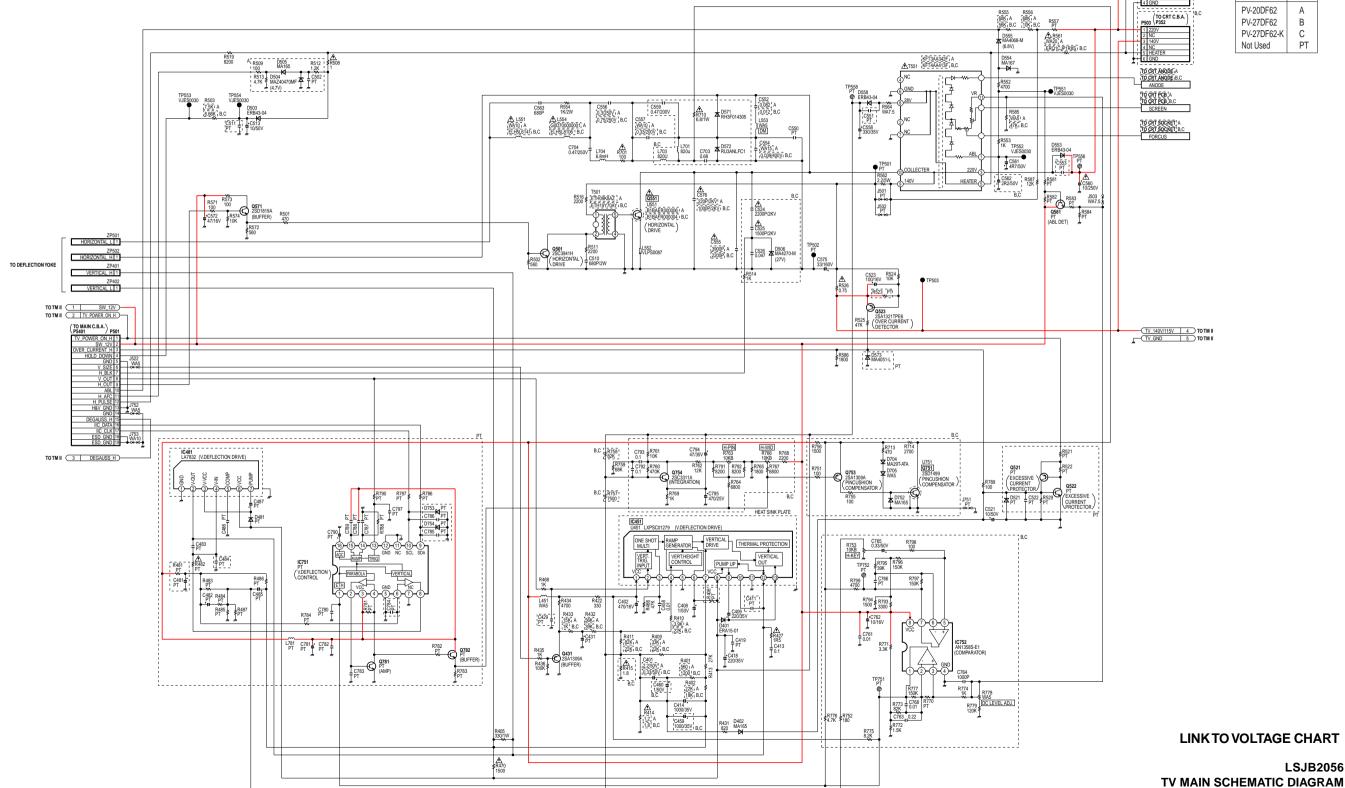
> NOTE: For placing a purchase order of the parts, be sure to use the part number listed in the parts list. Do not use the part number on this diagram.

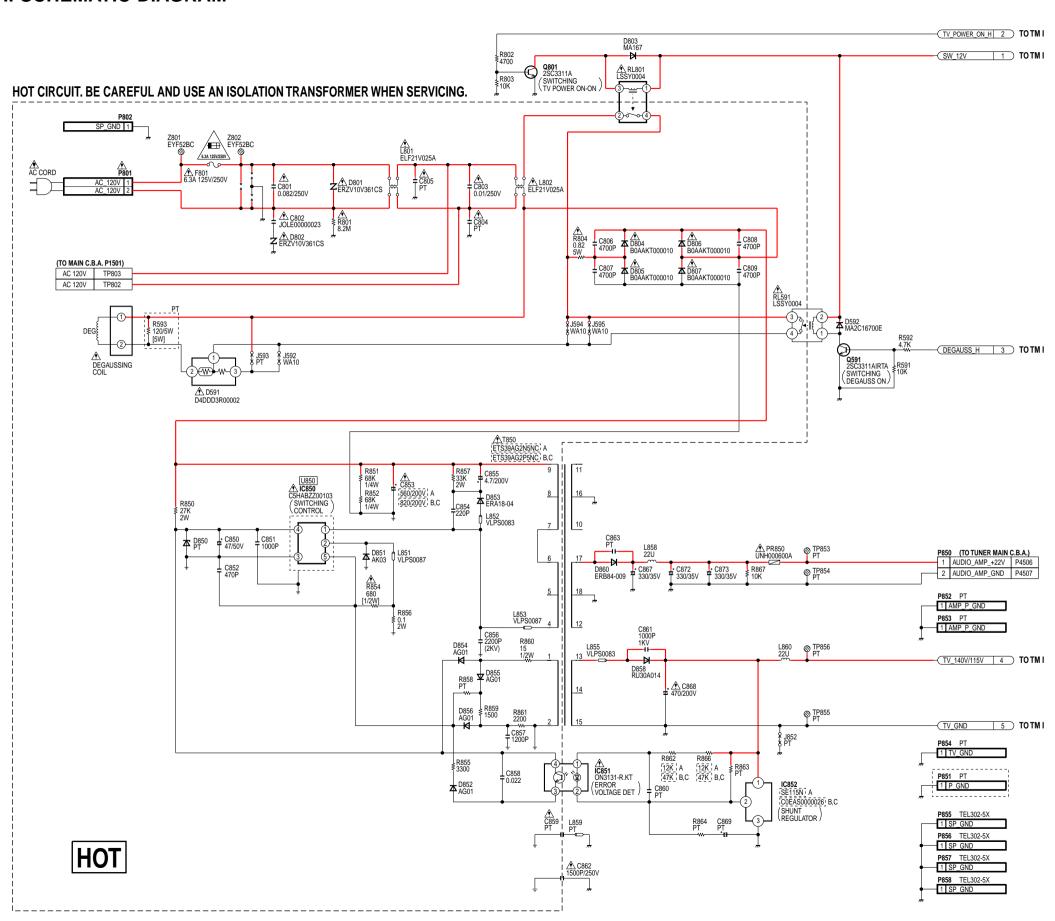
IMPORTANT SAFETY NOTICE: COMPONENTS IDENTIFIED BY THE SIGN A HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.



LSJB2056

PV-20DF62/PV-27DF62/PV-27DF62-K





FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES, REFER TO BEGINNING OF SCHEMATIC SECTION.

NOTE: For placing a purchase order of the parts, be sure to use the part number listed in the parts list. Do not use the part number on this diagram.

CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,
REPLACE ONLY WITH THE SAME TYPE 6.3A 125V/250V FUSE.
ATTENTION: POUR UNE PROTECTION CONTINUE LES RISQUES
D' INCENDIE N' UTILISERQUE DES FUSIBLE DE MÉME
TYPE 6.3A 125V/250V

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE SIGN A HAVE
SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS,
USE ONLY THE SPECIFIED PARTS.

COMPARISON CHART OF MODELS & MARKS

MODEL	MAR
PV-20DF62	Α
PV-27DF62	В
PV-27DF62-K	С
Not Used	PT

LINK TO VOLTAGE CHART

LSJB2056 TV MAIN SCHEMATIC DIAGRAM PV-20DF62/PV-27DF62/K

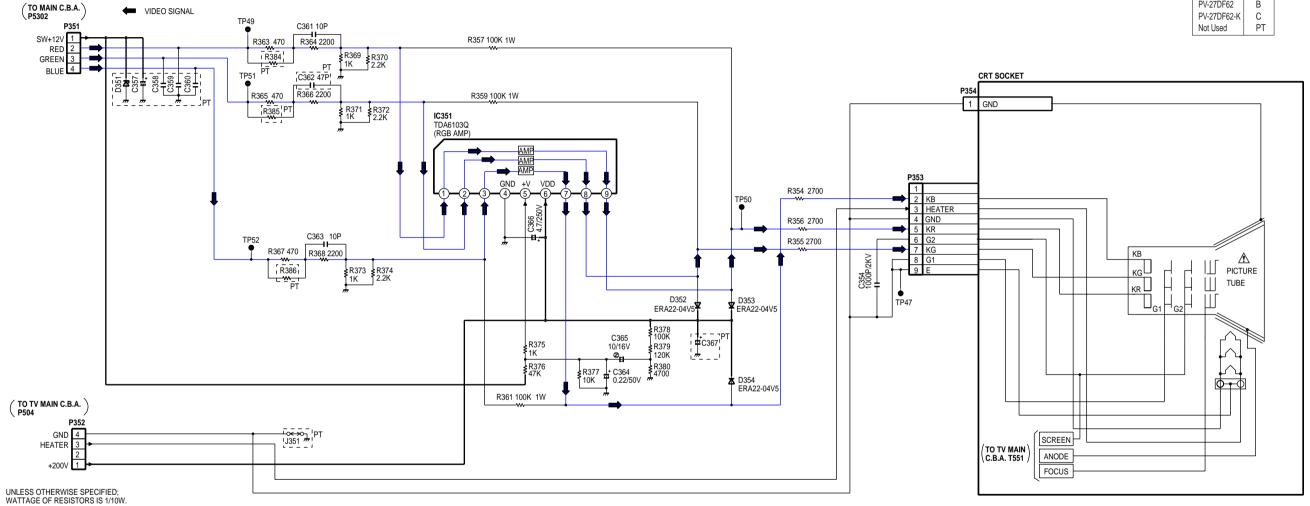
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES, REFER TO BEGINNING OF SCHEMATIC SECTION.

> NOTE: For placing a purchase order of the parts, be sure to use the part number listed in the parts list. Do not use the part number on this diagram.

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE SIGN A HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.

COMPARISON CHART OF MODELS & MARKS

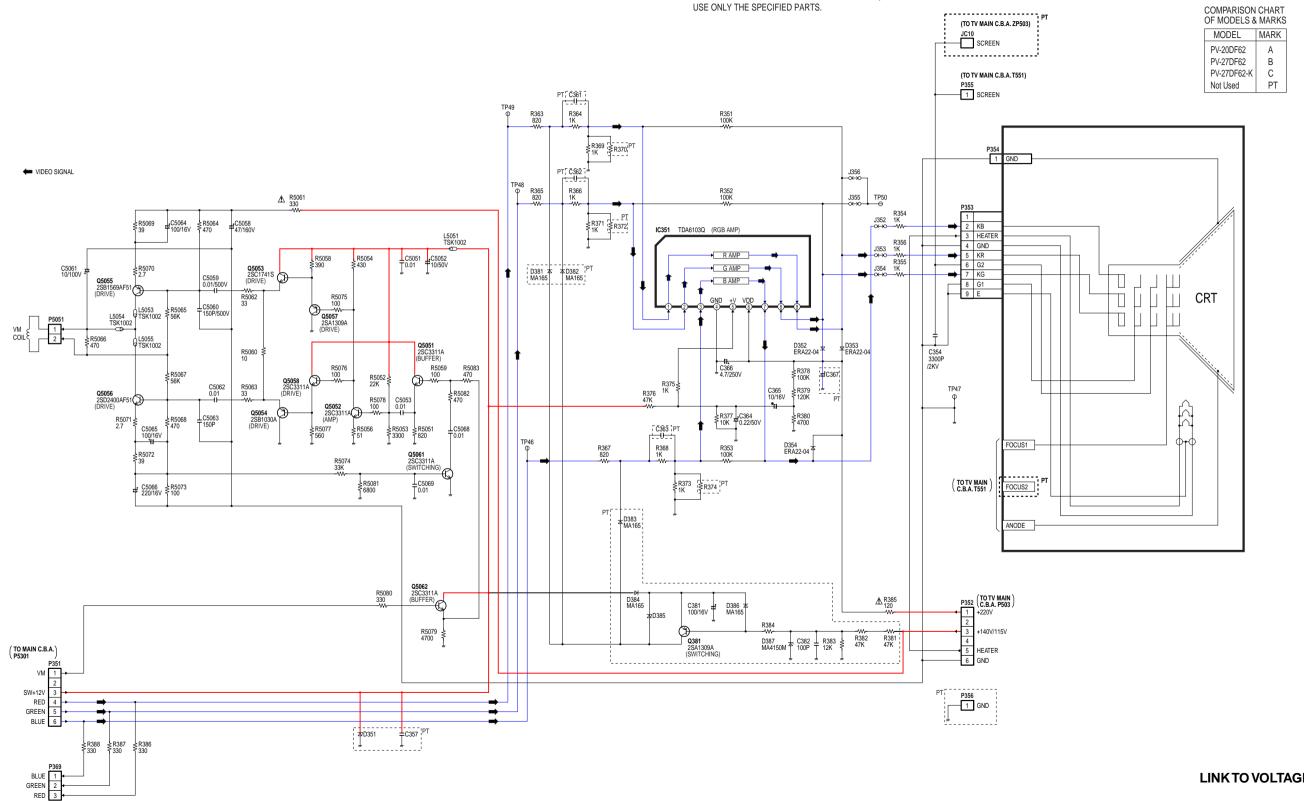
MODEL	MARK
PV-20DF62	Α
PV-27DF62	В
PV-27DF62-K	С
Not Used	PT



FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES. REFER TO BEGINNING OF SCHEMATIC SECTION.

> NOTE: For placing a purchase order of the parts, be sure to use the part number listed in the parts list. Do not use the part number on this diagram.

IMPORTANT SAFETY NOTICE: COMPONENTS IDENTIFIED BY THE SIGN A HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS,

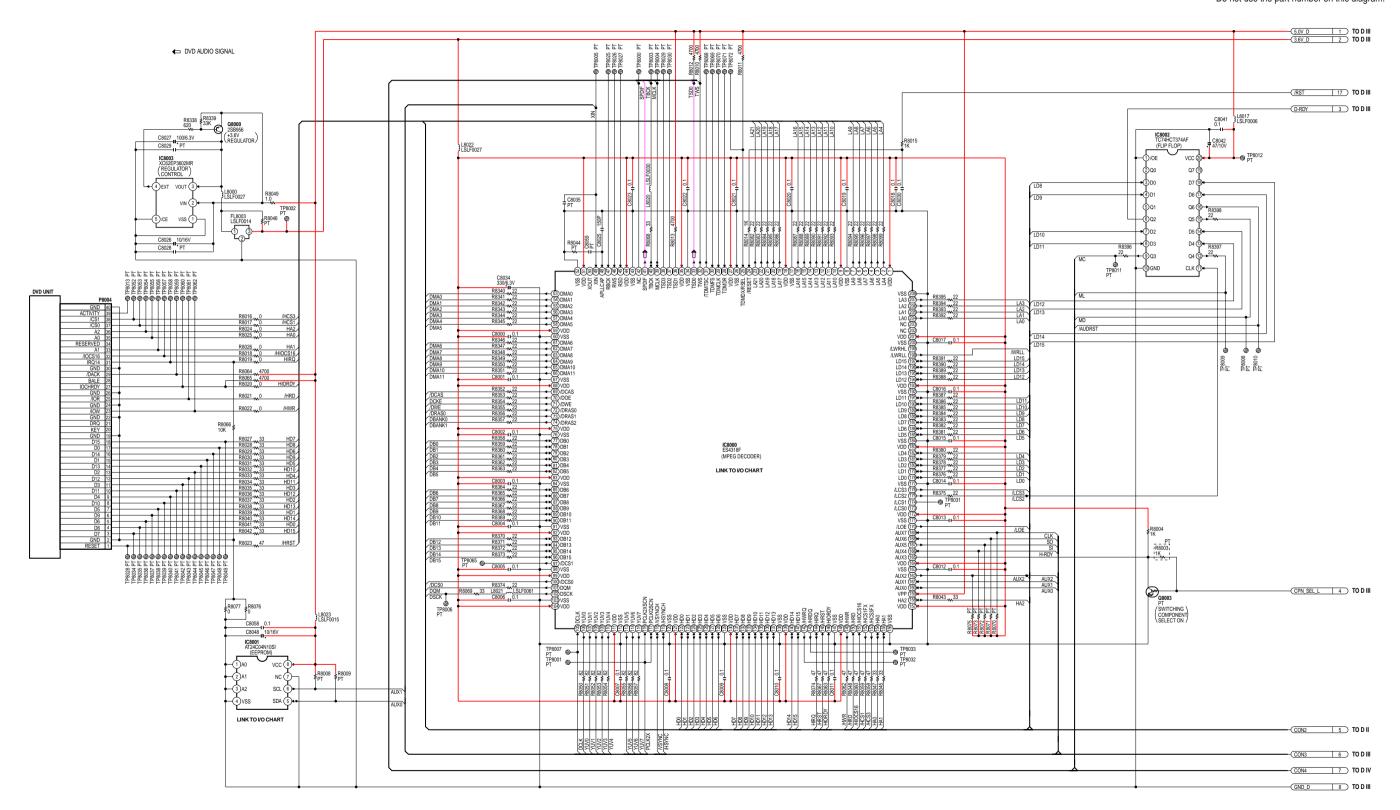


LINK TO VOLTAGE CHART

LRP63021 **CRT SCHEMATIC DIAGRAM** PV-27DF62/PV-27DF62-K

FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES, REFER TO BEGINNING OF SCHEMATIC SECTION.

NOTE: For placing a purchase order of the parts, be sure to use the part number listed in the parts list. Do not use the part number on this diagram.



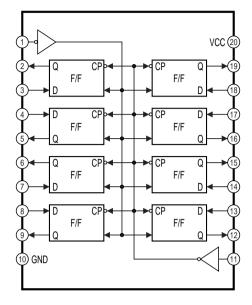
I/O CHART OF IC8000

Pin No.	I/O	Signal Name	Description
1	I	VDD	+3.6V
2	0	LA4	Memory address 4
3	0	LA5	Memory address 5
4	0	LA6	Memory address 6
5	0	LA7	Memory address 7
6	0	LA8	Memory address 8
7	0	LA9	Memory address 9
8	-	VSS	Ground
9	Ι	VDD	+3.6V
10	0	LA10	Memory address 10
11	0	LA11	Memory address 11
12	0	LA12	Memory address 12
13	0	LA13	Memory address 13
14	0	LA14	Memory address 14
15	0	LA15	Memory address 15
16	0	LA16	Memory address 16
17	-	VSS	Ground
18	ı	VDD	+3.6V
19	0	LA17	Memory address 17
20	0	LA18	Memory address 18
21	0	LA19	Memory address 19
22	0	LA20	Memory address 20
23	0	LA21	Memory address 21
24	I	/RESET	Reset : low
25	-	TDMDX/RSEL	(Not used)
26	-	VSS	Ground
27	ı	VDD	+3.6V
28	-	TDMDR	(Not used)
29	-	TDMCLK	(Not used)
30	-	TDMFS	(Not used)
31	-	/TDMTSC	(Not used)
32	0	TWS	Audio transmit frame sync
33	0	TSD0	Audio serial data
34	-	VSS	Ground
35	1	VDD	+3.6V
36	-	TSD1	(Not used)
37	-	TSD2	(Not used)
38	-	TSD3	(Not used)
39	I/O	MCLK	Audio master clock
40	I/O	TBCK	Audio transmit bit clock
41	0	SPDIF	IEC958 audio data
42	-	NC	(Not used)
43	-	VSS	Ground
44	ı	VDD	+3.6V
45	-	RSD	(Not used)
46	-	RWS	(Not used)
47	-	RBCK	(Not used)
48	-	APLLCAP	(Not used)
49	ı	XIN	27MHz clock
50	-	XOUT	(Not used)
51	-	VDD	+3.6V
52	-	VSS	Ground
53	0	DMA0	SDRAM address 0
	0	DMA1	SDRAM address 1
54	0	DMA2	SDRAM address 2
55		DMA3	SDRAM address 3
55 56	0	DMA3	SDRAM address 3
55		DMA3 DMA4 DMA5	SDRAM address 3 SDRAM address 4 SDRAM address 5

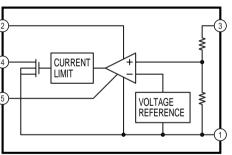
Pin No.	I/O	Signal Name	Description
60	-	VSS	Ground
61	0	DMA6	SDRAM address 6
62	0	DMA7	SDRAM address 7
63	0	DMA8	SDRAM address 8
64	0	DMA9	SDRAM address 9
65	0	DMA10	SDRAM address 10
66	0	DMA11	SDRAM address 11
67	-	VSS	Ground
68	1	VDD	+3.6V
69	0	/DCAS	Column address strobe : low
70	-	/DOE	(Not used)
71	0	/DWE	Write enable : low
72	0	/DRAS0	Row address strobe : low
73	-	/DRAS1	(Not used)
74	-	/DRAS2	(Not used)
75	1	VDD	+3.6V
76	-	VSS	Ground
77	1/0	DB0	SDRAM data 0
78	1/0	DB1	SDRAM data 1
79	1/0	DB2	SDRAM data 2
80	1/0	DB3	SDRAM data 3
81		DB4	SDRAM data 4
82	1/0	DB5	SDRAM data 5
83	1	VDD	+3.6V
84	-	VSS	Ground
85	I/O	DB6	SDRAM data 6
86	I/O	DB7	SDRAM data 7
87	I/O	DB8	SDRAM data 8
88	I/O	DB9	SDRAM data 9
89	I/O	DB10	SDRAM data 10
90	I/O	DB11	SDRAM data 11
91	-	VSS	Ground
92	- 1	VDD	+3.6V
93	I/O	DB12	SDRAM data 12
94	I/O	DB13	SDRAM data 13
95	I/O	DB14	SDRAM data 14
96	I/O	DB15	SDRAM data 15
97	0	/DCS1	SDRAM chip select : low
98	-	VSS	Ground
99	1	VDD	+3.6V
100	0	/DCS0	SDRAM chip select : low
101		DQM	Data input/output mask
102	0	DSCK	SDRAM clock
103	-	VSS	Ground
103	-	VDD	+3.6V
	1		
105	_	DCLK	27MHz clock
106	0	YUV0	YUV data 0
107	0	YUV1	YUV data 1
108	0	YUV2	YUV data 2
109	0	YUV3	YUV data 3
110	0	YUV4	YUV data 4
111	1	VDD	+3.6V
112	-	VSS	Ground
113	1	YUV5	YUV data 5
114	- 1	YUV6	YUV data 6
115	ı	YUV7	YUV data 7
116	Ι	PCLK2XSCN	2X pixel clock
117	I/O	PCLKQSCN	pixel clock

Pin No.	I/O	Signal Name	Description
119	I/O	/HSYNCH	V-sync signal
120	-	VSS	Ground
121	-	VDD	+3.6V
122	I/O	HD0	Host data 0
123	I/O	HD1	Host data 1
124	I/O	HD2	Host data 2
125	I/O	HD3	Host data 3
126	I/O	HD4	Host data 4
127	I/O	HD5	Host data 5
128	I/O	HD6	Host data 6
129	-	VSS	Ground
130	ı	VDD	+3.6V
131	I/O	HD7	Host data 7
132	I/O	HD8	Host data 8
133	I/O	HD9	Host data 9
134	I/O	HD10	Host data 10
135	1/0	HD11	Host data 11
136	1/0	HD12	Host data 12
137	1/0	HD13	Host data 13
138	-	VSS	Ground
139	1	VDD	+3.6V
140	1/0	HD14	Host data 14
141	1/0	HD15	Host data 15
142	-	/HWRQ	(Not used)
143	_	/HRDQ	(Not used)
144	1/0	HIRQ	Host interrupt
145	1/0	/HRST	Host reset : low
146	i	HIORDY	Host I/O ready
147	-	VSS	Ground
148	Ť	VDD	+3.6V
149	0	/HWR	Host write request : low
150	ī	/HRD	Host read request : low
151	i	/HIOCS16	Device 16-bit data transfer
152	0	/HCS1FX	Host select 1
153	0	/HCS3FX	Host select 3
	_		
154	1/0	HA0	Host address 0
155	I/O	HA1	Host address 1
156	-	VSS	Ground
157	1/0	VDD	+3.6V
158	1/0	HA2	Host address 2
159	1/0	VPP	Peripheral protection voltage
160	1/0	AUX0	I2C serial data
161	1	AUX1	I2C serial clock
162	0	AUX2	DVD ready (Busy : low)
163	-	VSS	Ground
164	ı	VDD	+3.6V
165	-	AUX3	(Not used)
166	1	AUX4	DVD chip select : low
167	0	AUX5	Serial data 1
168	1	AUX6	Serial data 0
169	1	AUX7	Serial clock
170	0	/LOE	Output enable : low
171	-	VSS	Ground
172	-	VDD	+3.6V
173	-	/LCS0	(Not used)
174	-	/LCS1	(Not used)
175	0	/LCS2	Clock
176	0	/LCS3	Memory chip select : low
		VSS	Ground

IC8002 FLIP FLOP IC-DETAIL BLOCK DIAGRAM



IC8003 REGULATOR CONTROL IC-DETAIL BLOCK DIAGRAM



I/O CHART OF IC8001

Pin No. I/O Signal Name

178 I/O LD0

179 I/O LD1

180 I/O LD2

181 I/O LD3

182 I/O LD4

183 I VDD

185 I/O LD5

186 I/O LD6

187 I/O LD7

188 I/O LD8

189 I/O LD9

190 I/O LD10

191 I/O LD11

194 I/O LD12

195 I/O LD13 196 I/O LD14

197 I/O LD15

198 O /LWRLL

/LWRHL

VSS

I VDD

- NC

204 O LA0

205 O LA1

206 O LA2

207 O LA3

208 - VSS

NC

- VSS

I VDD

192

193

200

201

203

- VSS

Description

Memory data 0

Memory data 1

Memory data 2

Memory data 3

Memory data 4

Memory data 5

Memory data 6

Memory data 7

Memory data 8

Memory data 9

Memory data 10

Memory data 11

Memory data 12

Memory data 13

Memory data 14

Memory data 15

Write enable : low

(Not used)

(Not used)

(Not used)

Ground

Memory address 0

Memory address 1

Memory address 2

Memory address 3

Ground

+3.6V

Ground

+3.6V

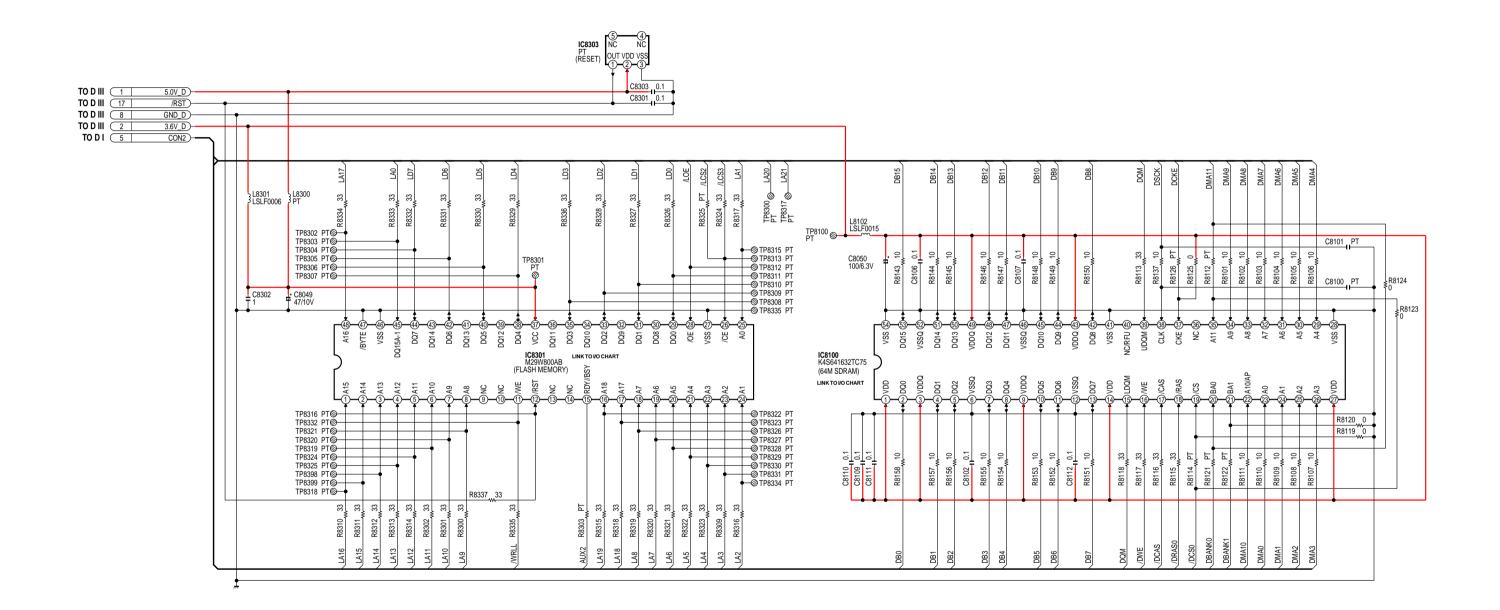
+3.6V

Ground

Pin No.	I/O	Signal Name	Description
1	-	A0	(Not used)
2	-	A1	(Not used)
3	-	A2	(Not used)
4	-	VSS	Ground
5	I/O	SDA	I2C Serial data
6	0	SCL	I2C Serial clock
7	-	NC	(Not used)
8	Ī	VCC	+5.0V

FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES, REFER TO BEGINNING OF SCHEMATIC SECTION.

NOTE: For placing a purchase order of the parts, be sure to use the part number listed in the parts list. Do not use the part number on this diagram.



LINK TO VOLTAGE CHART

I/O CHART OF IC8301

I/O I	Signal Name	Description
	A15	Memory address 16
ı	A14	Memory address 15
-	A13	Memory address 14
		Memory address 13
-		Memory address 12
		Memory address 11
		Memory address 10
-		Memory address 9
-		(Not used)
-		(Not used)
I		Write enable : low
-		Reset: low
-		(Not used)
-		(Not used)
1	RDY/BSY	DVD Ready (Busy : low)
I	A18	Memory address 19
1	A17	Memory address 18
1	A7	Memory address 8
I	A6	Memory address 7
-	A5	Memory address 6
1	A4	Memory address 5
-	A3	Memory address 4
-	A2	Memory address 3
-	A1	Memory address 2
-	A0	Memory address 1
-	/CE	Memory chip select : low
-	VSS	Ground
-	/OE	Output enable : low
I/O	DQ0	Memory data 0
I/O	DQ8	Memory data 8
I/O	DQ1	Memory data 1
I/O	DQ9	Memory data 9
I/O	DQ2	Memory data 2
I/O	DQ10	Memory data 10
I/O	DQ3	Memory data 3
I/O	DQ11	Memory data 11
I	VCC	+5.0V
I/O	DQ4	Memory data 4
I/O	DQ12	Memory data 12
I/O	DQ5	Memory data 5
I/O	DQ13	Memory data 13
I/O	DQ6	Memory data 6
I/O	DQ14	Memory data 14
I/O	DQ7	Memory data 7
I/O	DQ15A-1	Memory address 0
-	VSS	Ground
-	/BYTE	Ground
ı	A16	Memory address 16
		A12

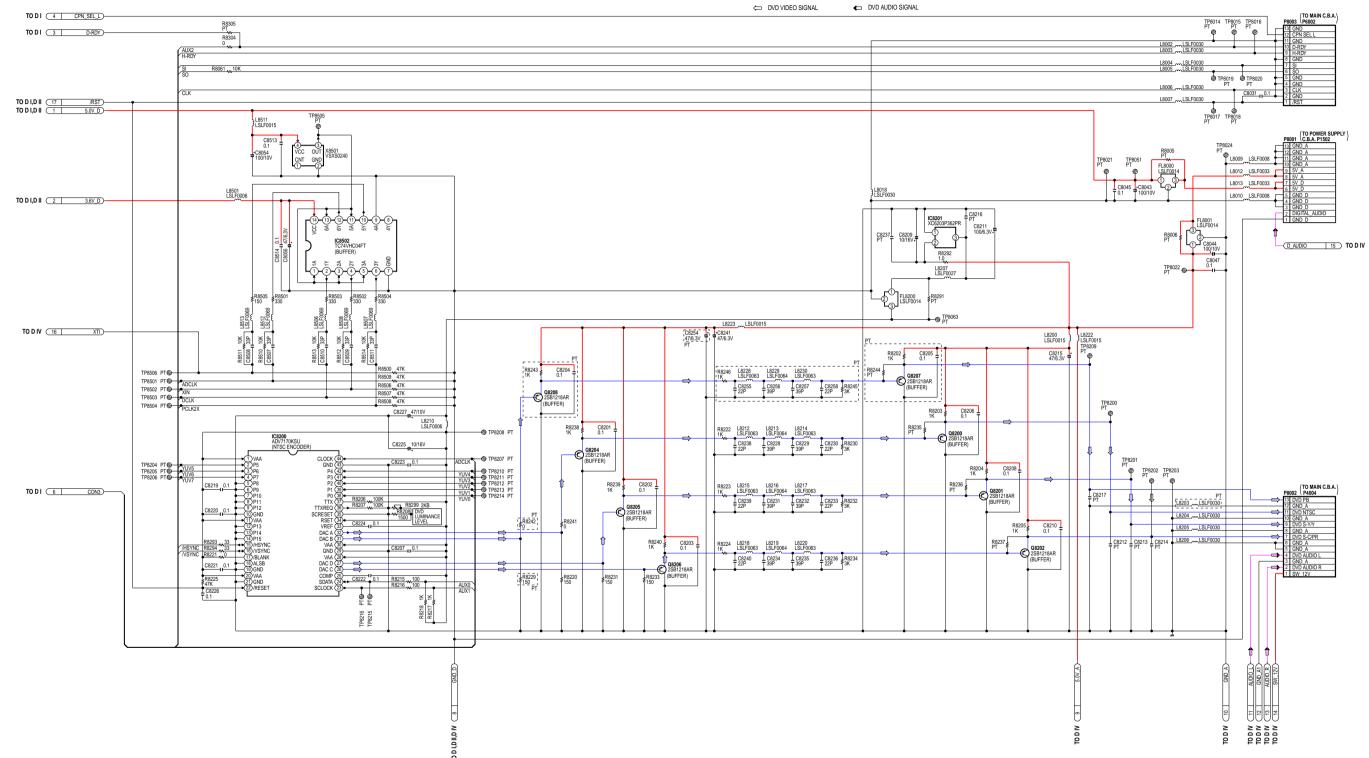
I/O CHART OF IC8100

Pin No.	I/O	Signal Name	Description
1	-1	VDD	+3.6V
2	I/O	DQ0	SDRAM data 7
3	-1	VDDQ	+3.6V
4	I/O	DQ1	SDRAM data 6
5	I/O	DQ2	SDRAM data 5
6	-	VSSQ	Ground
7	I/O	DQ3	SDRAM data 4
8	I/O	DQ4	SDRAM data 3
9	-	VDDQ	+3.6V
10	I/O	DQ5	SDRAM data 2
11	I/O	DQ6	SDRAM data 1
12	-	VSSQ	Ground
13	I/O	DQ7	SDRAM data 0
14	-1	VDD	+3.6V
15	-	LDQM	Data input/output mask
16	- 1	/WE	Write enable : low
17	-1	/CAS	Column address strobe : low
18		/RAS	Row address strobe : low
19	-1	/CS	SDRAM chip select : low
20	-	BA0	(Not used)
21	- 1	BA1	(Not used)
22	-	A10	SDRAM address 10
23	-	A0	SDRAM address 0
24		A1	SDRAM address 1
25	-	A2	SDRAM address 2
26	-	A3	SDRAM address 3
27	-	VDD	+3.6V

Pin No.	I/O	Signal Name	Description
28	-	VSS	Ground
29	-	A4	SDRAM address 4
30	I	A5	SDRAM address 5
31	I	A6	SDRAM address 6
32	-	A7	SDRAM address 7
33	I	A8	SDRAM address 8
34	I	A9	SDRAM address 9
35	-	A11	SDRAM address 11
36	-	NC	(Not used)
37	-	CKE	(Not used)
38	I	CLK	SDRAM clock
39	ı	UDQM	Data input/output mask
40	-	NC	(Not used)
41	-	VSS	Ground
42	I/O	DQ8	SDRAM data 8
43	ı	VDDQ	+3.6V
44	I/O	DQ9	SDRAM data 9
45	I/O	DQ10	SDRAM data 10
46	-	VSSQ	Ground
47	I/O	DQ11	SDRAM data 11
48	I/O	DQ12	SDRAM data 12
49	ı	VDDQ	+3.6V
50	I/O	DQ13	SDRAM data 13
51	I/O	DQ14	SDRAM data 14
52	-	VSSQ	Ground
53	I/O	DQ15	SDRAM data 15
54	-	VSS	Ground

FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES, REFER TO BEGINNING OF SCHEMATIC SECTION.

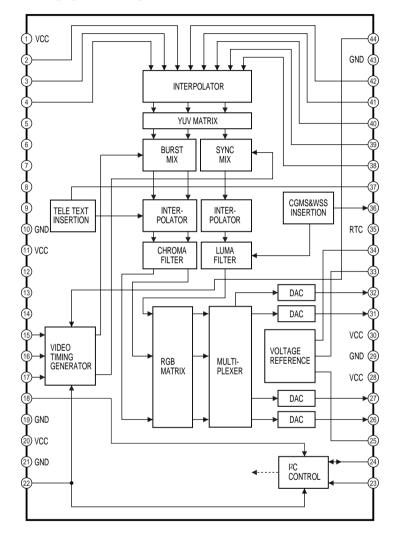
NOTE: For placing a purchase order of the parts, be sure to use the part number listed in the parts list. Do not use the part number on this diagram.



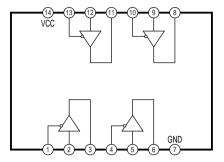
LINK TO VOLTAGE CHART

LSJB2007 DVD DECODER III SCHEMATIC DIAGRAM PV-20DF62/PV-27DF62/PV-27DF62-K

IC8200 NTSC ENCODER IC-DETAIL BLOCK DIAGRAM



IC8502 BUFFER IC-DETAIL BLOCK DIAGRAM



27MHz clock

Description

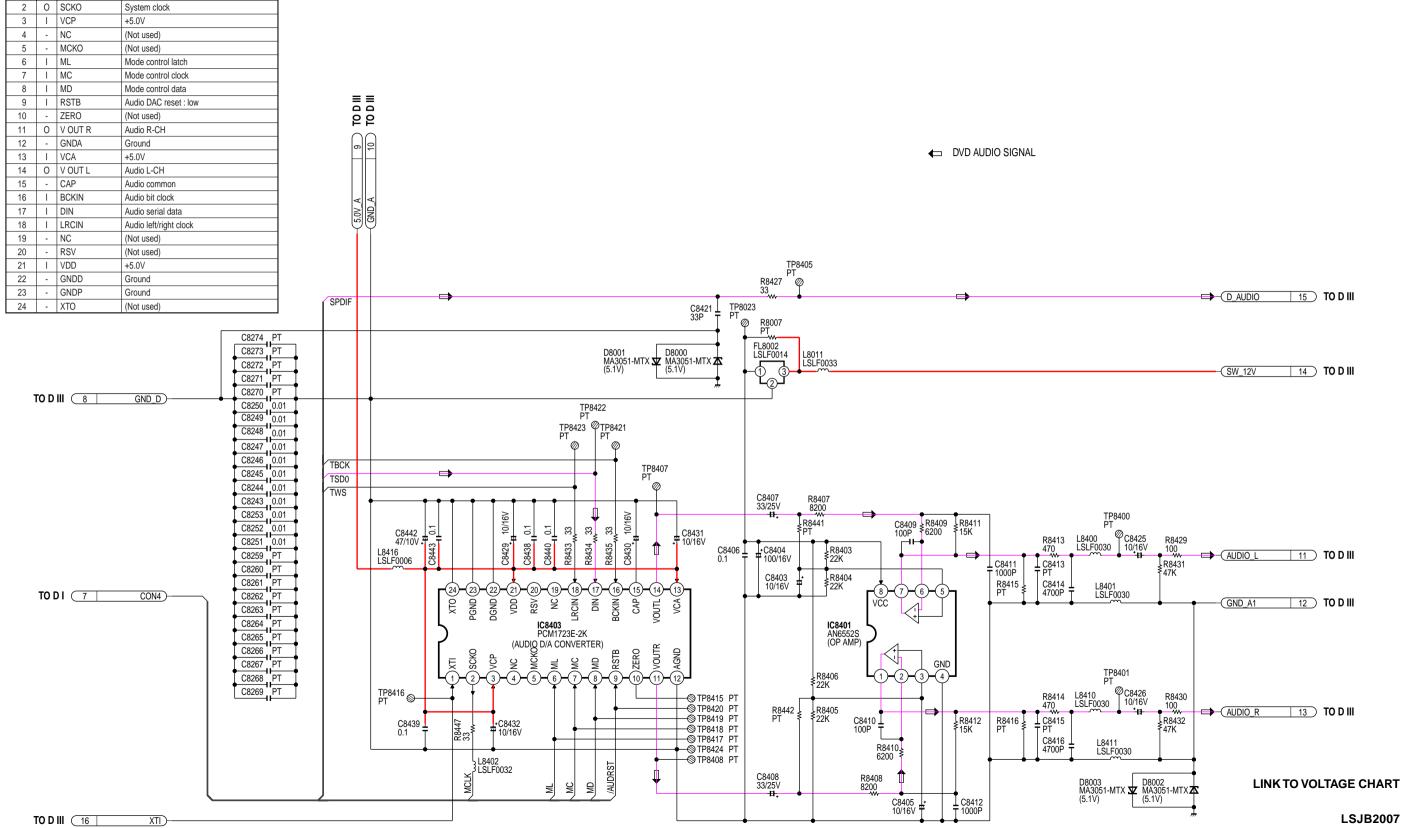
Pin No. I/O Signal Name

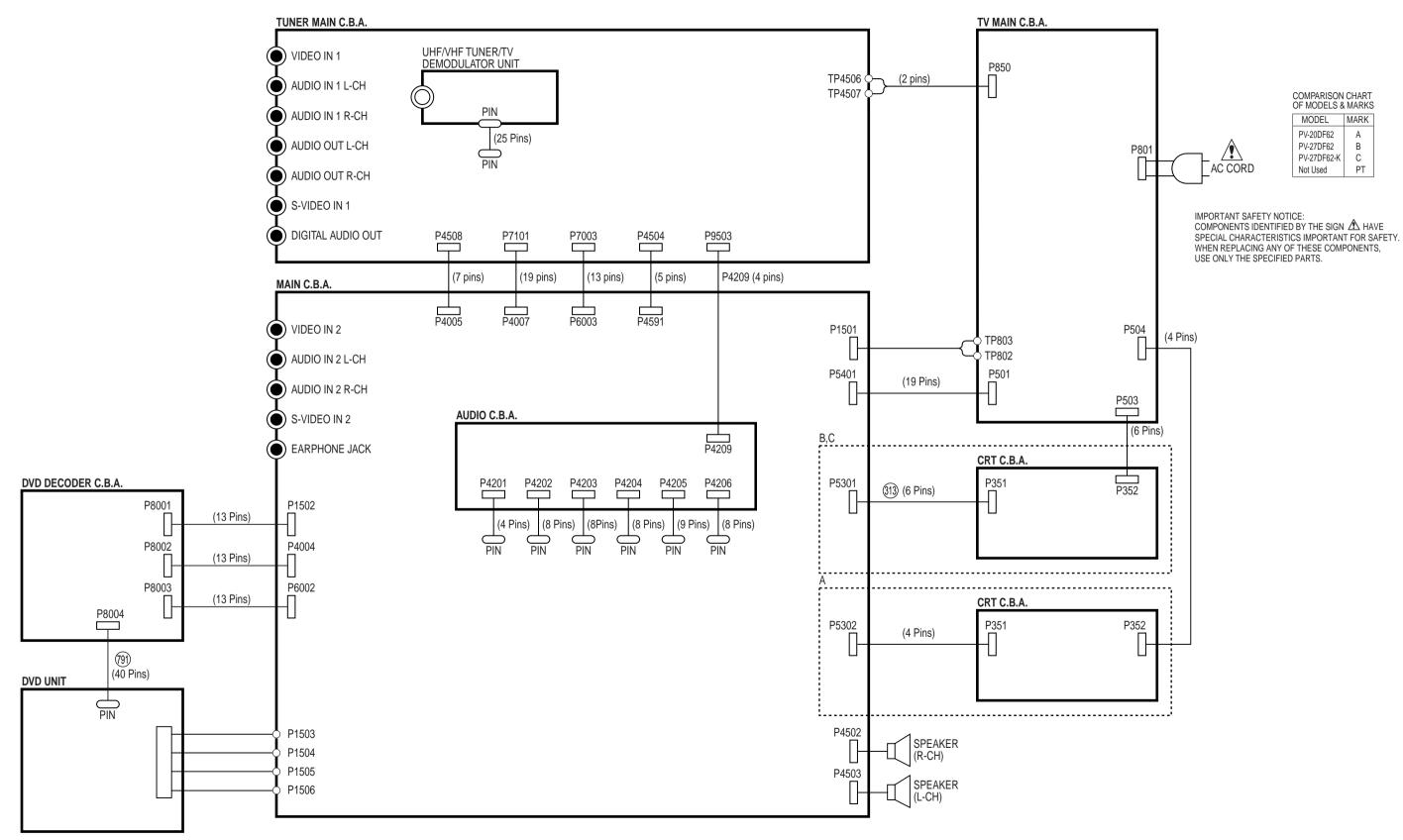
ı XTI

FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES, REFER TO BEGINNING OF SCHEMATIC SECTION.

NOTE:

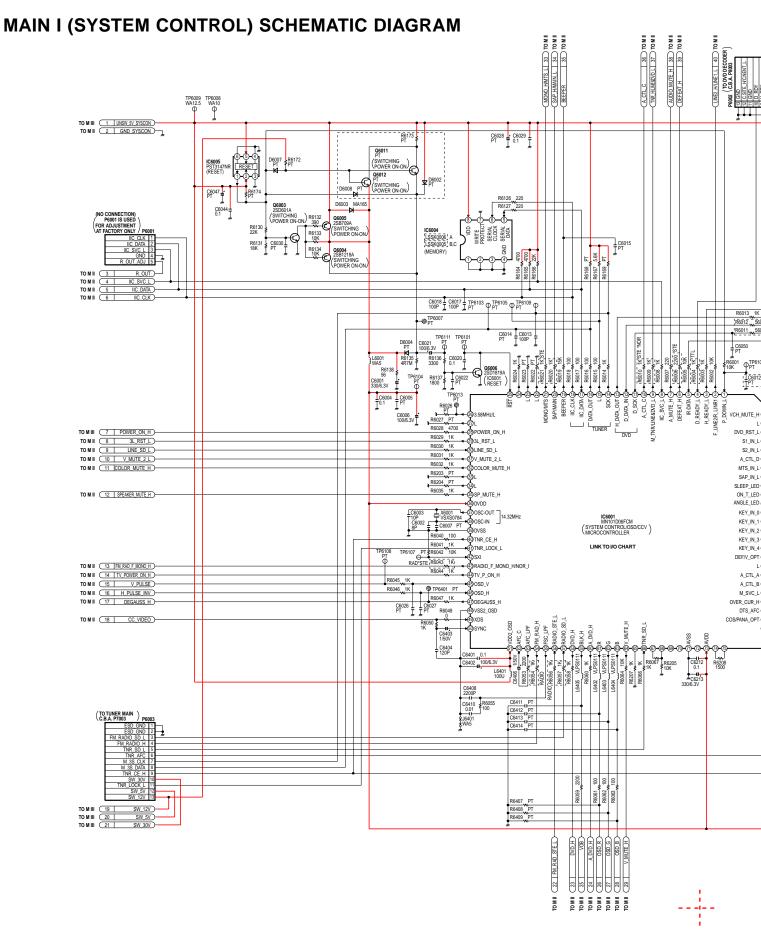
NOTE: For placing a purchase order of the parts, be sure to use the part number listed in the parts list. Do not use the part number on this diagram.



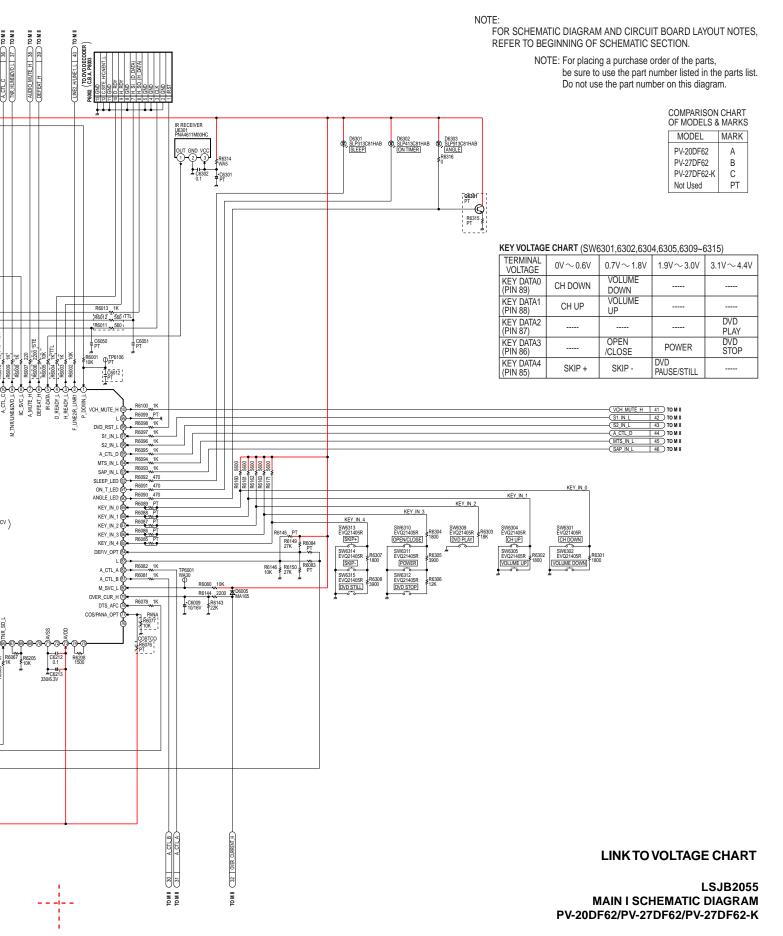


8.2. MAIN SCHEMATIC DIAGRAMS



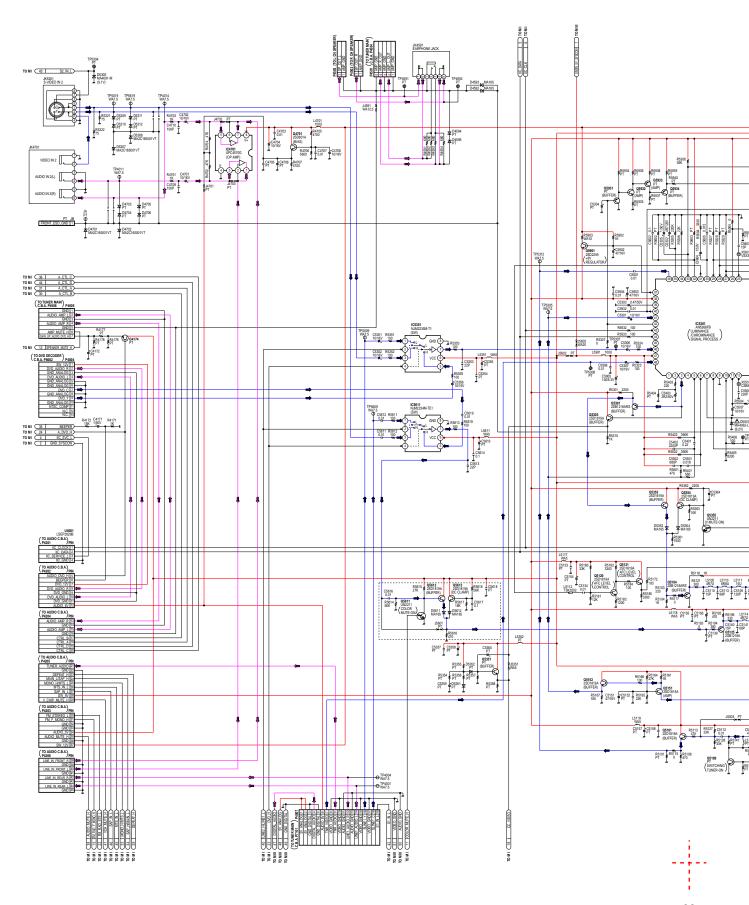






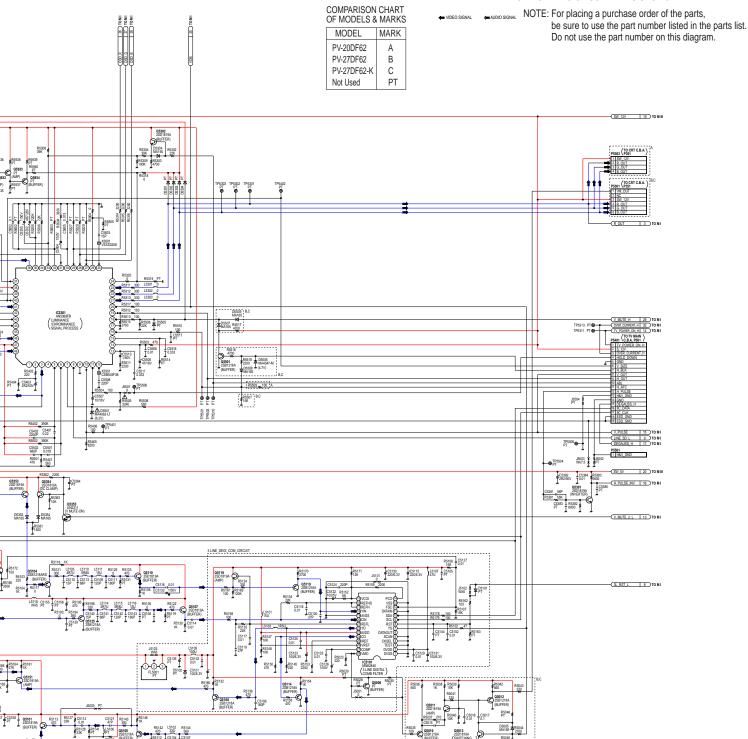
. - | - -

MAIN II (TV Y/C PROCESS) SCHEMATIC DIAGRAM





FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES, REFER TO BEGINNING OF SCHEMATIC SECTION.



LINK TO VOLTAGE CHART

LSJB2055 MAIN II SCHEMATIC DIAGRAM PV-20DF62/PV-27DF62-K





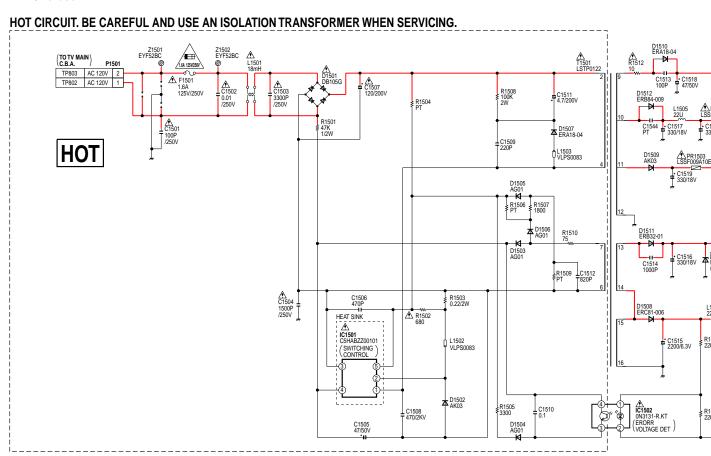
MAIN III (POWER SUPPLY) SCHEMATIC DIAGRAM

IMPORTANT SAFETY NOTICE: COMPONENTS IDENTIFIED BY THE SIGN A HAV SPECIAL CHARACTERISTICS IMPORTANT FOR SA WHEN REPLACING ANY OF THESE COMPONENTS USE ONLY THE SPECIFIED PARTS.

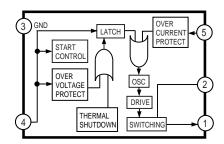
1.6A 125/250V

CAUTION: FOR CONTINUED PROTECTION AGAINST F REPLACE ONLY WITH THE SAME TYPE 1.6. ATTENTION: POUR UNE PROTECTION CON D'T INCENDIE N'I UTILISERQUE DES FUSIB

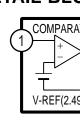
AUDIO SIGNAL



IC1501 SWITCHING CONTROL IC- DETAIL BLOCK DIAGRAM



IC1503 SHUNT IC- DETAIL BLO







ETY NOTICE: DENTIFIED BY THE SIGN 🗘 HAVE CTERISTICS IMPORTANT FOR SAFETY. NG ANY OF THESE COMPONENTS, SPECIFIED PARTS.

TINUED PROTECTION AGAINST FIRE HAZARD ONLY WITH THE SAME TYPE 1.6A 125/250V FUSE ON: POUR UNE PROTECTION CONTINUE LES RISQUES IDIE N'I UTILISERQUE DES FUSIBLE DE MÉME

<u>125/250V</u>

NOTE:

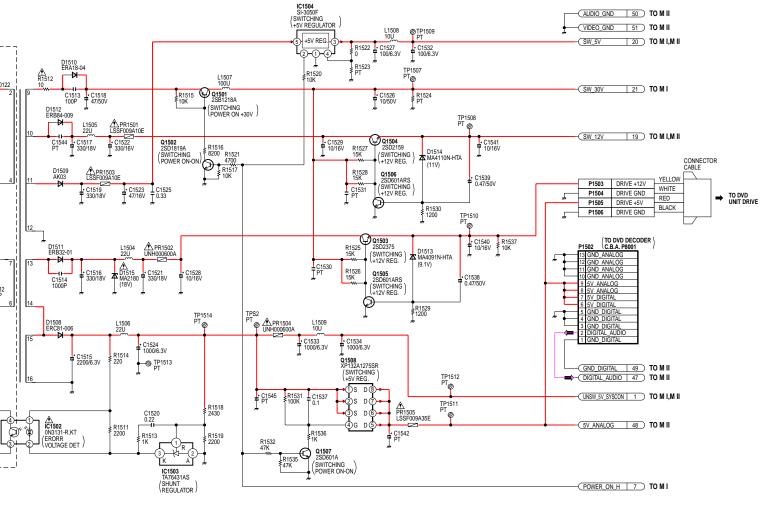
PARTS ENCLOSED IN DASHED LINES MARKED "PT" ARE NOT USED.

COMPARISON CHART OF MODELS & MARKS

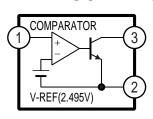
OF WODELO & WATER			
MODEL	MARK		
PV-20DF62	Α		
PV-27DF62	В		
PV-27DF62-K	С		
Not Used	PT		

FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES. REFER TO BEGINNING OF SCHEMATIC SECTION.

> NOTE: For placing a purchase order of the parts, be sure to use the part number listed in the parts list. Do not use the part number on this diagram.



1503 SHUNT REGULATOR - DETAIL BLOCK DIAGRAM







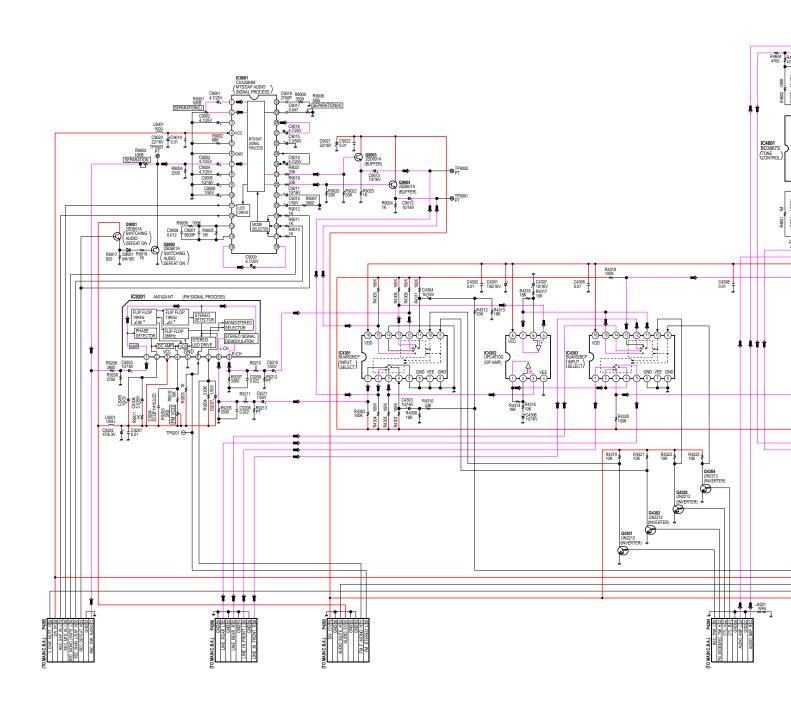
LINK TO VOLTAGE CHART

LSJB2055 MAIN III SCHEMATIC DIAGRAM PV-20DF62/PV-27DF62/PV-27DF62-K



8.3. AUDIO SCHEMATIC DIAGRAMS

AUDIO SCHEMATIC DIAGRAM



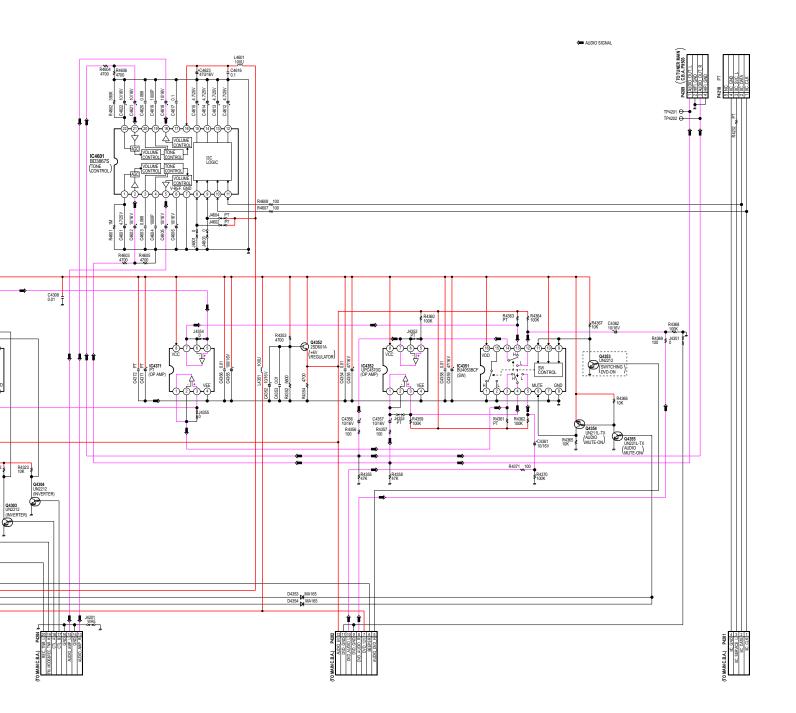


NOTE:
PARTS ENCLOSED IN DASHED LINES MARKED "PT" ARE NOT USED.

NOTE:

FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES, REFER TO BEGINNING OF SCHEMATIC SECTION.

NOTE: For placing a purchase order of the parts, be sure to use the part number listed in the parts list. Do not use the part number on this diagram.



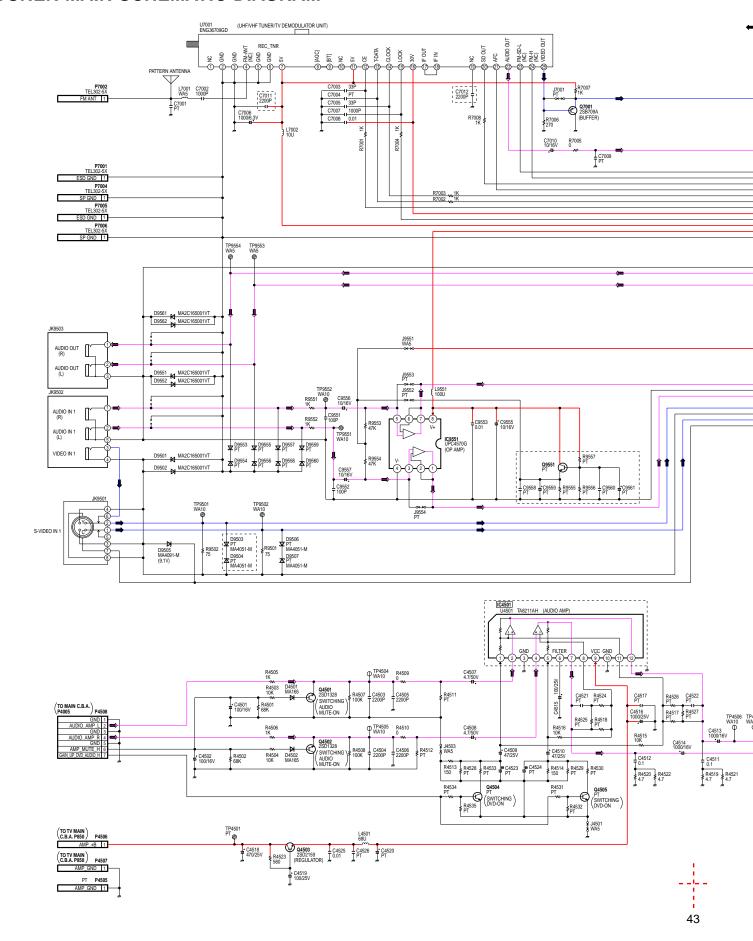
LINK TO VOLTAGE CHART

LSJB2029 AUDIO SCHEMATIC DIAGRAM PV-20DF62/PV-27DF62/PV-27DF62-K



8.4. TUNER MAIN SCHEMATIC DIAGRAMS

TUNER MAIN SCHEMATIC DIAGRAM





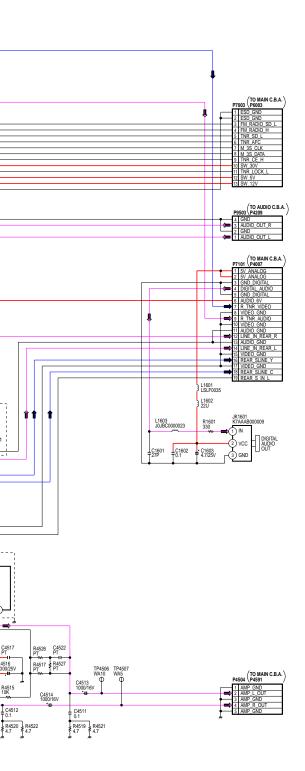
PARTS ENCLOSED IN DASHED LINES MARKED "PT" ARE NOT USED.

◆ VIDEO SIGNAL ◆ AUDIO SIGNAL

NOTE:

FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES, REFER TO BEGINNING OF SCHEMATIC SECTION.

NOTE: For placing a purchase order of the parts, be sure to use the part number listed in the parts list. Do not use the part number on this diagram.

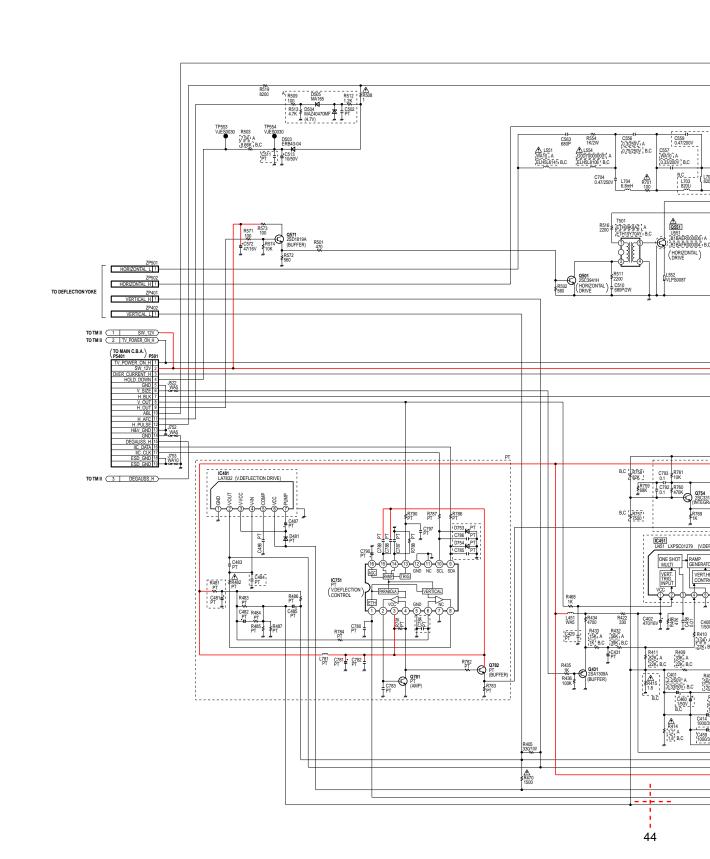


LINK TO VOLTAGE CHART

LSJB2057 TUNER MAIN SCHEMATIC DIAGRAM PV-20DF62/PV-27DF62/PV-27DF62-K

8.5. TV MAIN SCHEMATIC DIAGRAMS

TV MAIN I SCHEMATIC DIAGRAM

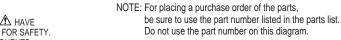


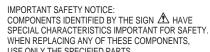


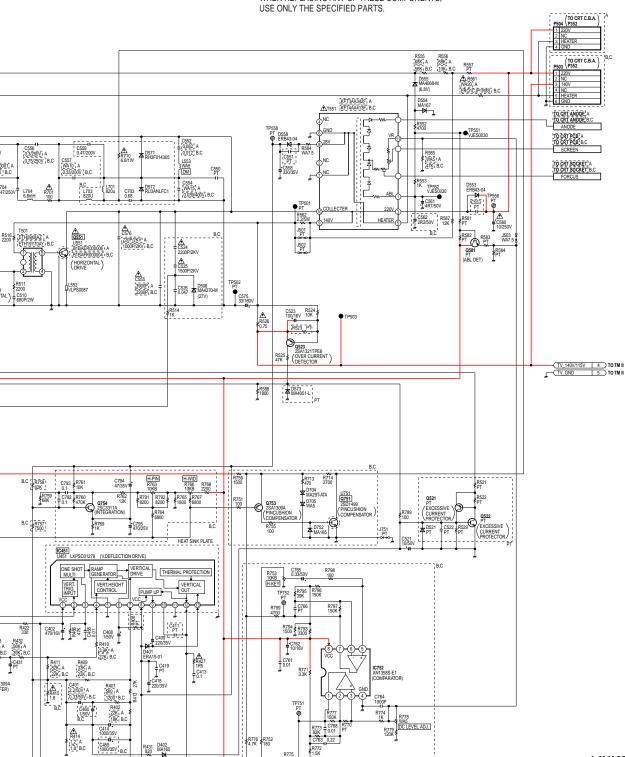
44

NOTE:

FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES, REFER TO BEGINNING OF SCHEMATIC SECTION.







COMPARISON CHART OF MODELS & MARKS MODEL MARK

 MODEL
 MARK

 PV-20DF62
 A

 PV-27DF62
 B

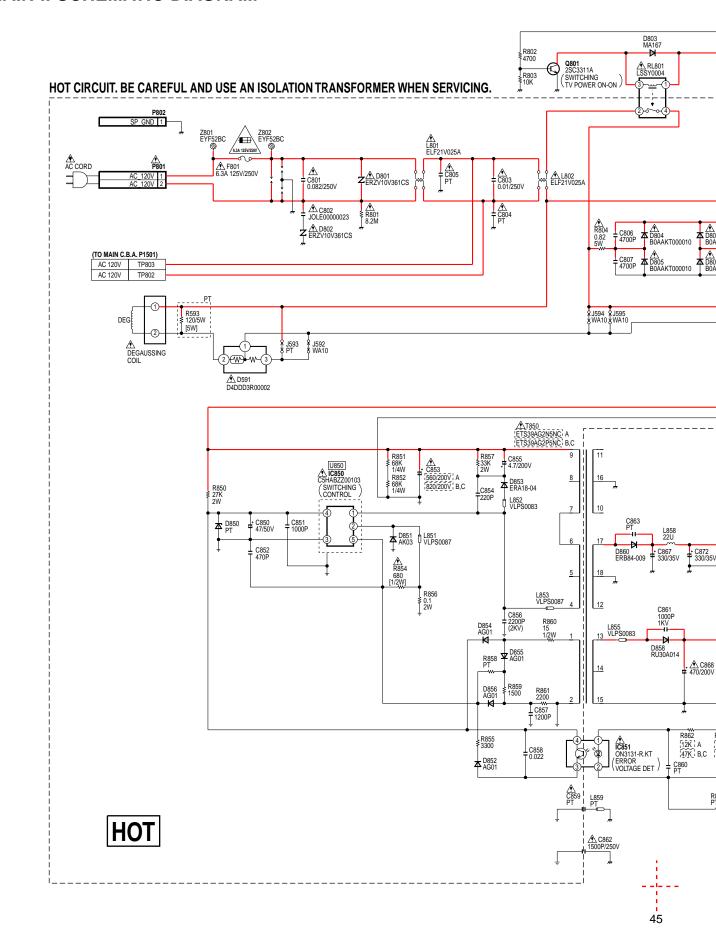
 PV-27DF62-K
 C

 Not Used
 PT

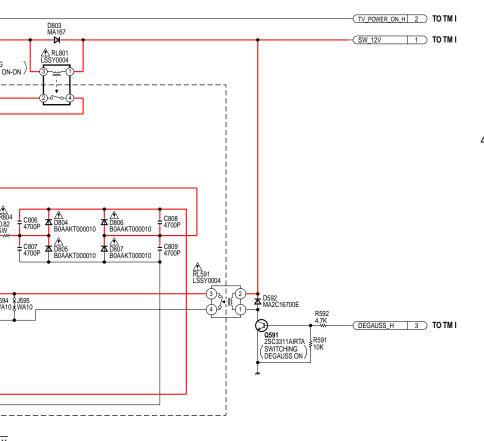
LINK TO VOLTAGE CHART

LSJB2056 TV MAIN SCHEMATIC DIAGRAM PV-20DF62/PV-27DF62/PV-27DF62-K

TV MAIN II SCHEMATIC DIAGRAM







FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES, REFER TO BEGINNING OF SCHEMATIC SECTION.

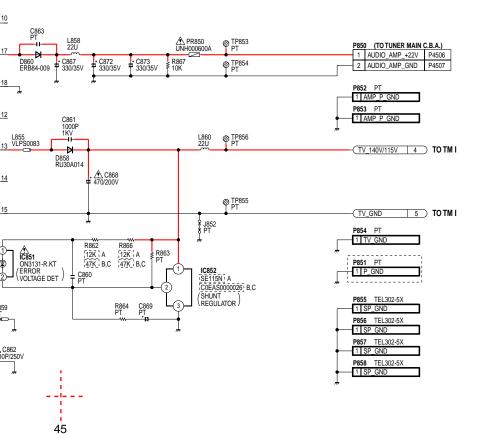
NOTE: For placing a purchase order of the parts, be sure to use the part number listed in the parts list. Do not use the part number on this diagram.

CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,
REPLACE ONLY WITH THE SAME TYPE 6.3A 125V/250V FUSE.
ATTENTION: POUR UNE PROTECTION CONTINUE LES RISQUES
D' INCENDIE N' UTILISERQUE DES FUSIBLE DE MÉME
TYPE 6.3A 125V/250V

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE SIGN A HAVE
SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS,
USE ONLY THE SPECIFIED PARTS.

COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-20DF62	Α
PV-27DF62	В
PV-27DF62-K	С
Not Used	PT



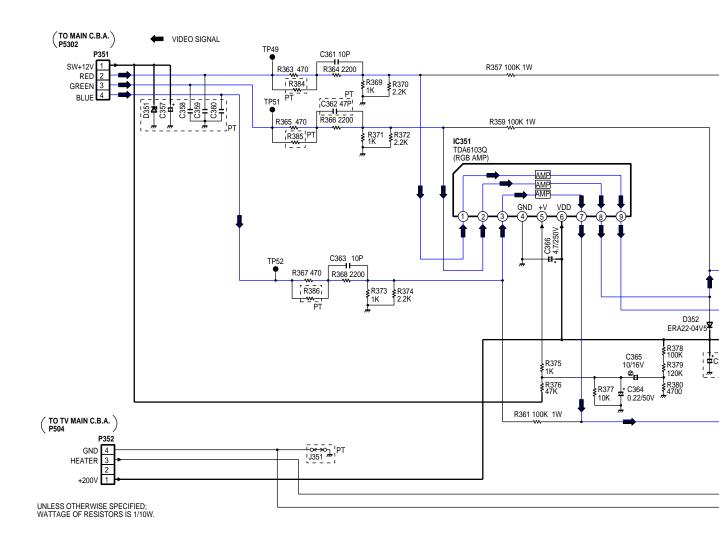
LINK TO VOLTAGE CHART

LSJB2056 TV MAIN SCHEMATIC DIAGRAM PV-20DF62/PV-27DF62/PV-27DF62-K

8.6. CRT SCHEMATIC DIAGRAM (MODEL: PV-20DF62)



CRT SCHEMATIC DIAGRAM (A)





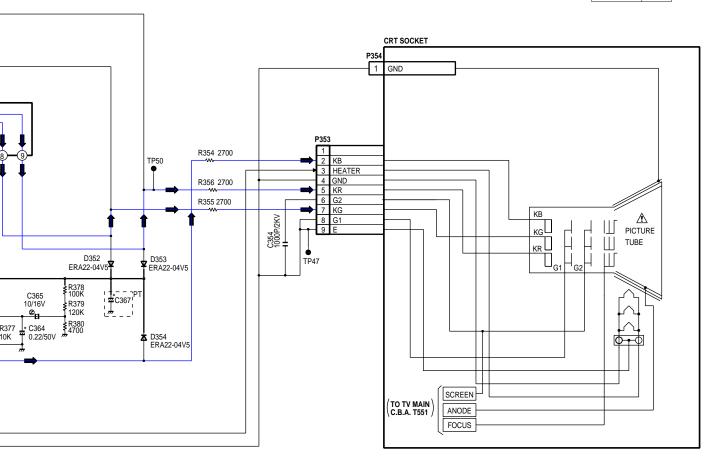
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES, REFER TO BEGINNING OF SCHEMATIC SECTION.

NOTE: For placing a purchase order of the parts, be sure to use the part number listed in the parts list. Do not use the part number on this diagram.

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE SIGN A HAVE
SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS,
USE ONLY THE SPECIFIED PARTS.

COMPARISON CHART OF MODELS & MARKS

MARK
Α
В
С
PT



LINK TO VOLTAGE CHART

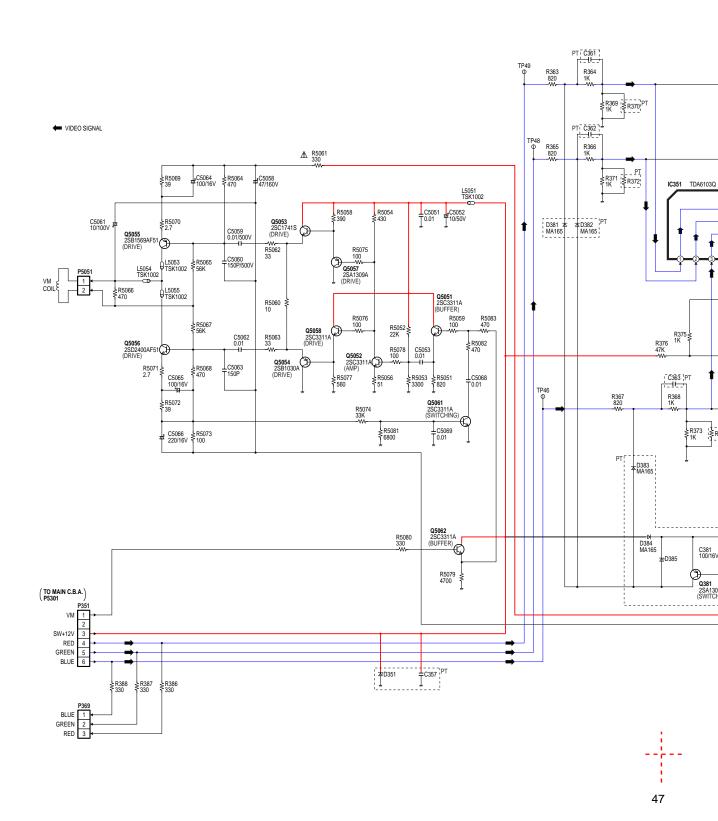
LRP63013 CRT SCHEMATIC DIAGRAM PV-20DF62



8.7. CRT SCHEMATIC DIAGRAM (MODELS: PV-27DF62/PV-27DF62-K)

IMP COI SPE WH USE

CRT SCHEMATIC DIAGRAM (B,C)



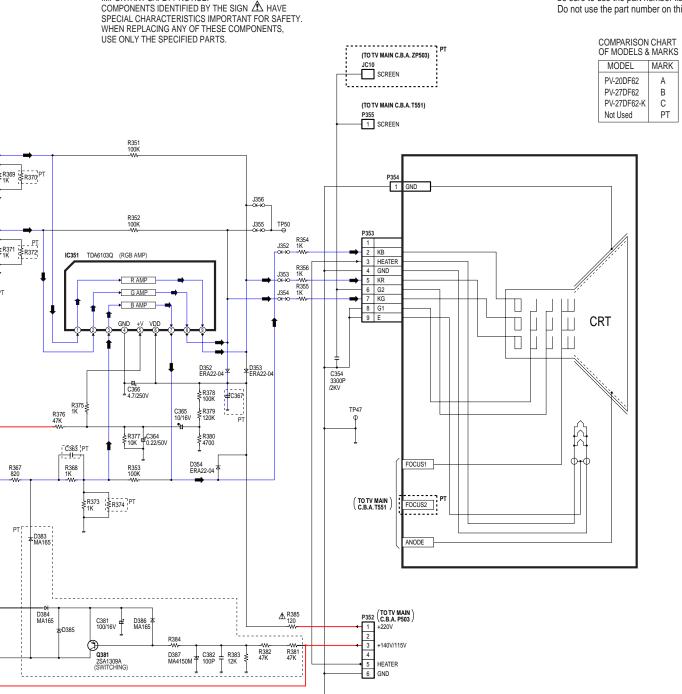


IMPORTANT SAFETY NOTICE:

NOTE:

FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES, REFER TO BEGINNING OF SCHEMATIC SECTION.

NOTE: For placing a purchase order of the parts, be sure to use the part number listed in the parts list. Do not use the part number on this diagram.



P356 1 GND

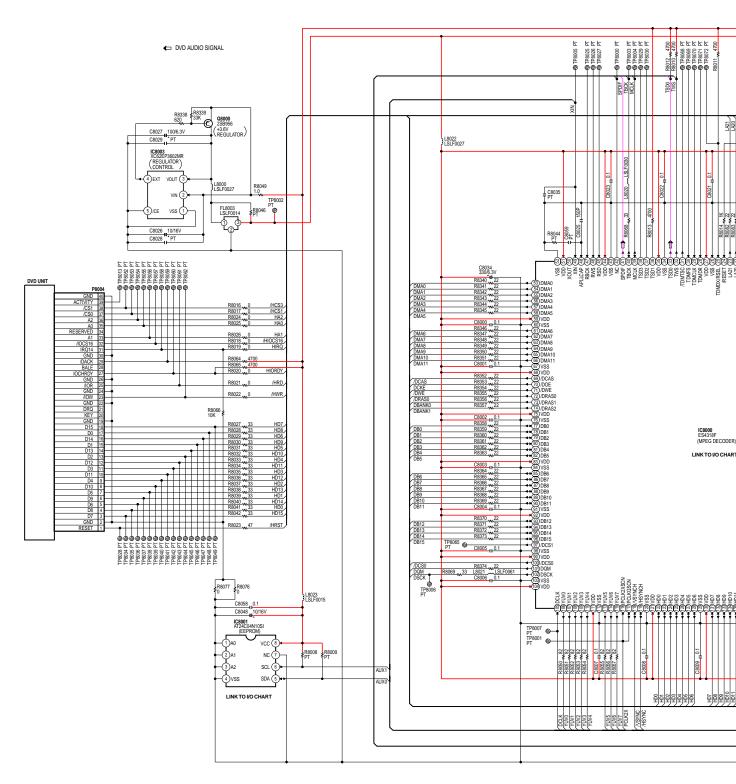
LINK TO VOLTAGE CHART

LRP63021 CRT SCHEMATIC DIAGRAM PV-27DF62/PV-27DF62-K



8.8. DVD DECODER SCHEMATIC DIAGRAMS

DVD DECODER I SCHEMATIC DIAGRAM



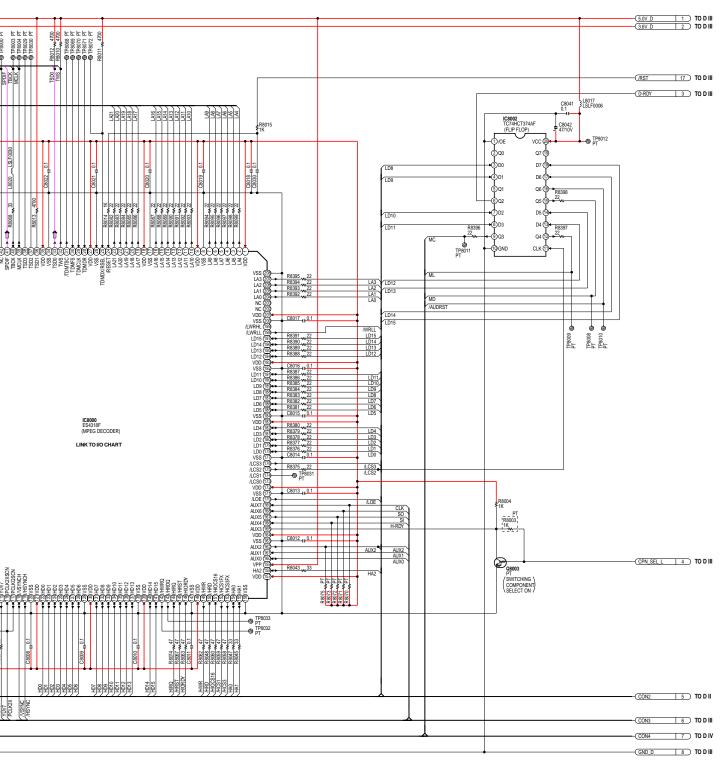


NOTE:
PARTS ENCLOSED IN DASHED LINES MARKED "PT" ARE NOT USED.

NOTE:

FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES, REFER TO BEGINNING OF SCHEMATIC SECTION.

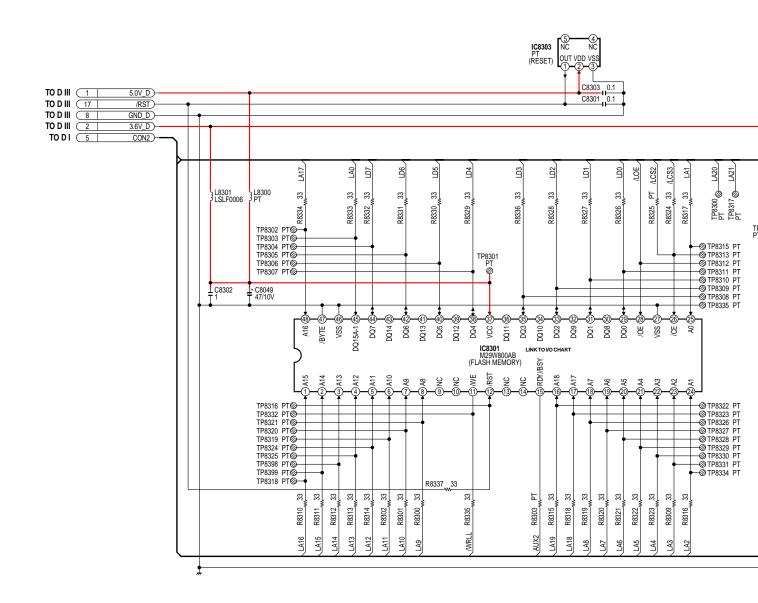
NOTE: For placing a purchase order of the parts, be sure to use the part number listed in the parts list. Do not use the part number on this diagram.







DVD DECODER II SCHEMATIC DIAGRAM



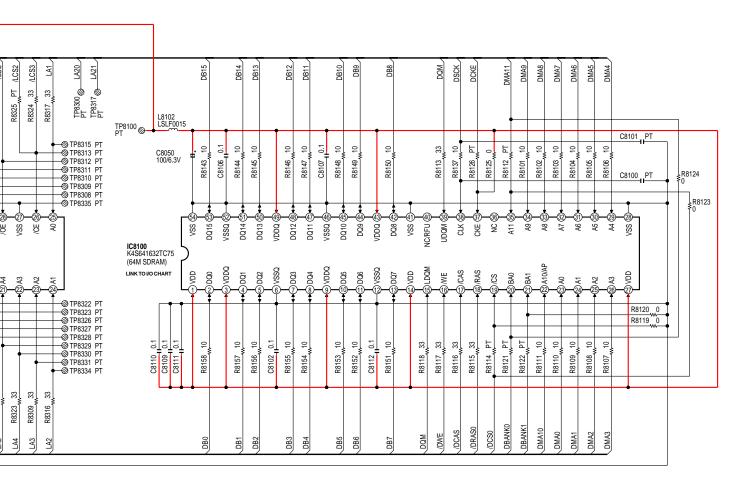


PARTS ENCLOSED IN DASHED LINES MARKED "PT" ARE NOT USED.

NOTE:

FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES, REFER TO BEGINNING OF SCHEMATIC SECTION.

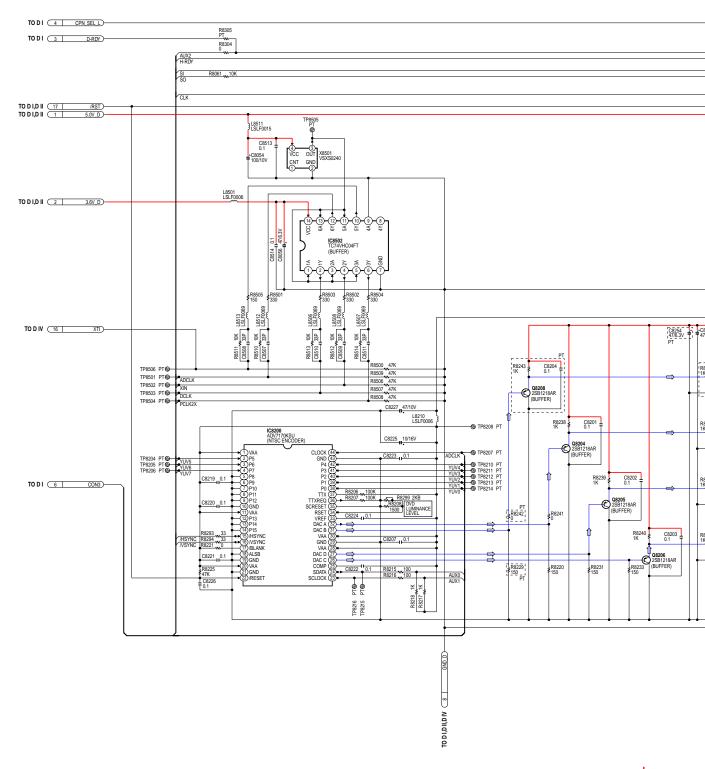
NOTE: For placing a purchase order of the parts, be sure to use the part number listed in the parts list. Do not use the part number on this diagram.



LINK TO VOLTAGE CHART



DVD DECODER III SCHEMATIC DIAGRAM



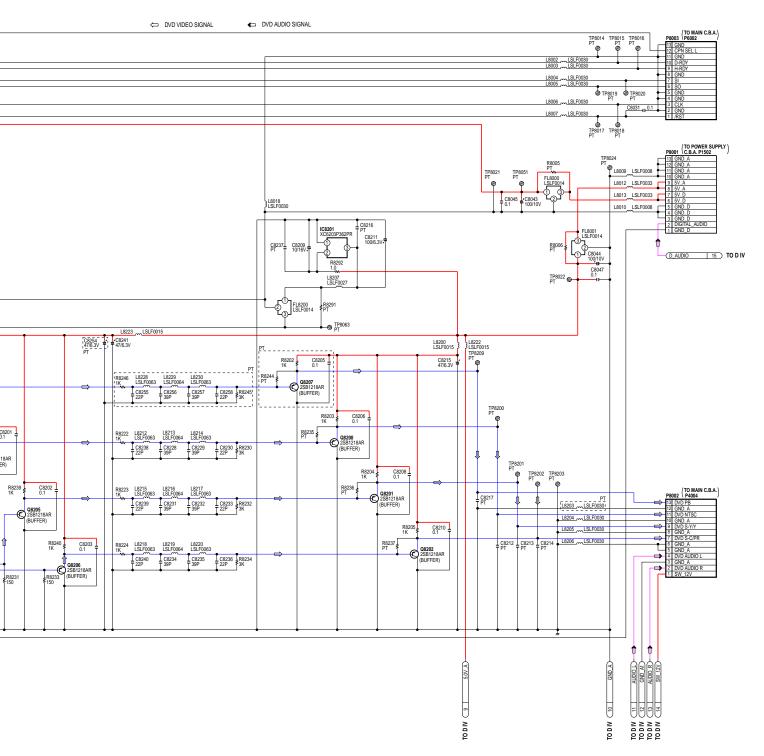


PARTS ENCLOSED IN DASHED LINES MARKED "PT" ARE NOT USED.

NOTE:

FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES, REFER TO BEGINNING OF SCHEMATIC SECTION.

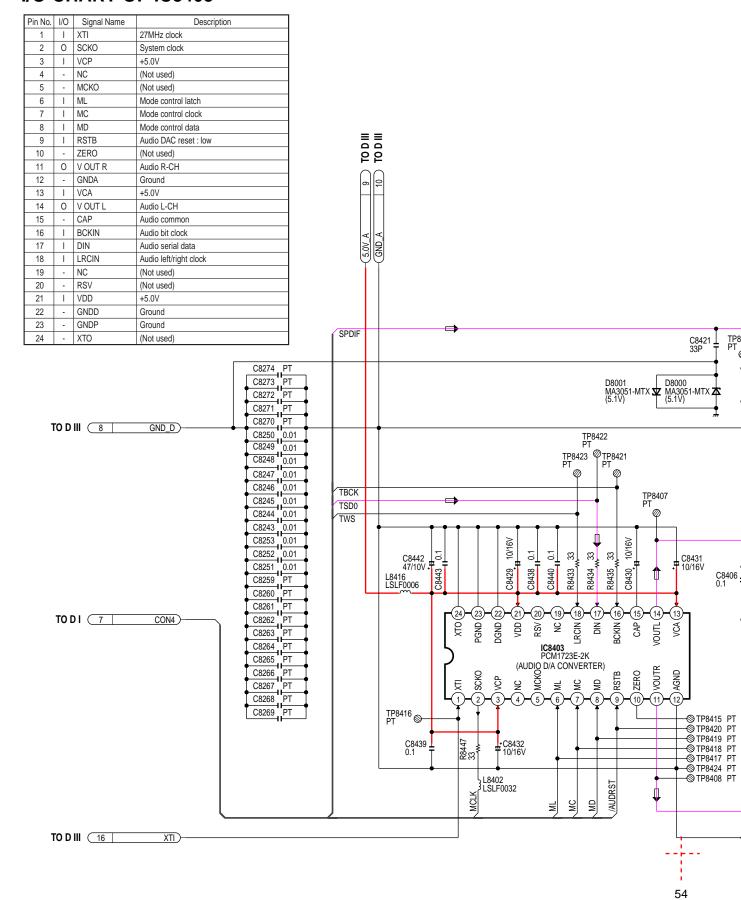
NOTE: For placing a purchase order of the parts, be sure to use the part number listed in the parts list. Do not use the part number on this diagram.



LINK TO VOLTAGE CHART

LSJB2007 DVD DECODER III SCHEMATIC DIAGRAM PV-20DF62/PV-27DF62/PV-27DF62-K

DVD DECODER IV SCHEMATIC DIAGRAM I/O CHART OF IC8403



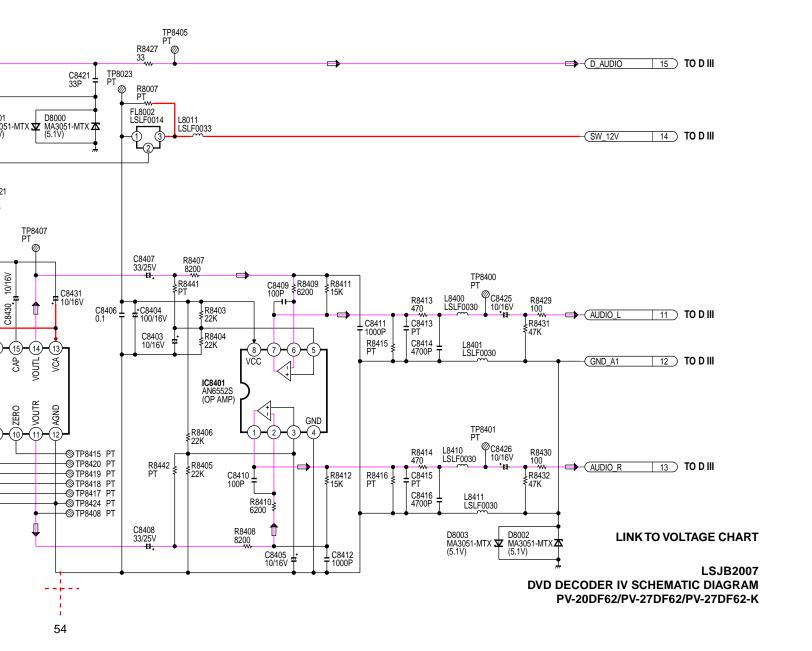


NOTE:
PARTS ENCLOSED IN DASHED LINES MARKED "PT" ARE NOT USED.

NOTE:

FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES, REFER TO BEGINNING OF SCHEMATIC SECTION.

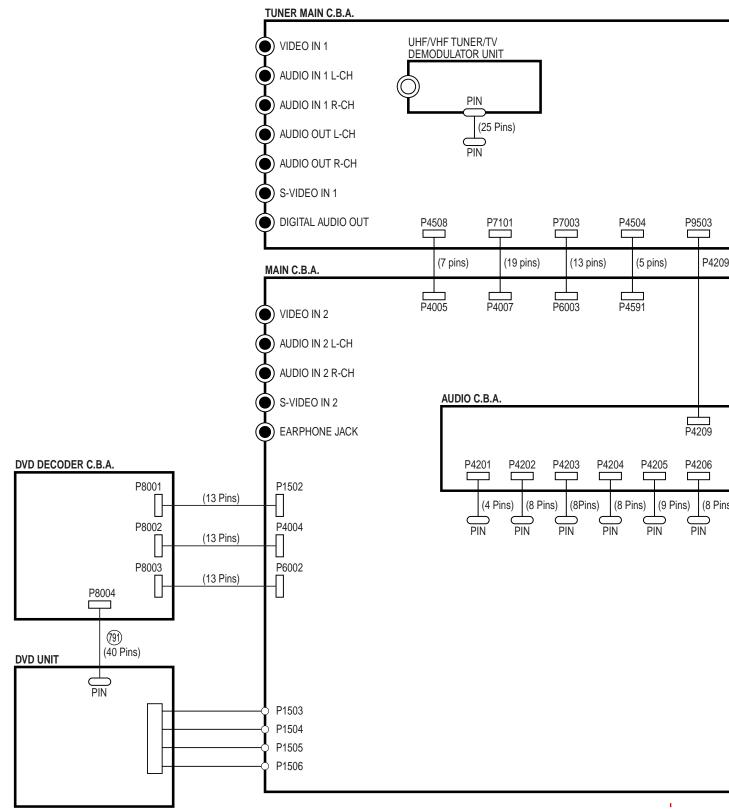
NOTE: For placing a purchase order of the parts, be sure to use the part number listed in the parts list. Do not use the part number on this diagram.



8.9. INTERCONNECTION SCHEMATIC DIAGRAM

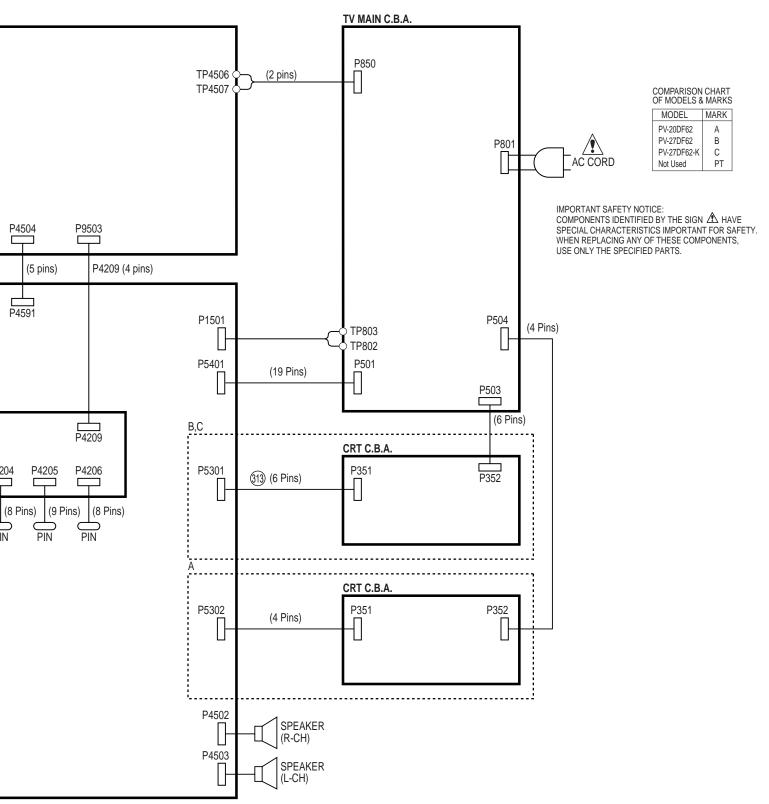


INTERCONNECTION SCHEMATIC DIAGRAM





NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.



5.0

8

MAIN	C.B.A.	(POV	VER S	UPPL'	Y/V
MODE	STOP		MODE	STOP	
PIN NO.			PIN NO.		
IC1501			25	2.5	
1	168.9		26	2.5	
2	0.4		27	3.5	
3	0		28	0.7	
4	13.2		IC5301		
5	1.7		1		
IC1502			2	0.2	
1	5.0		3	3.9	
2	4.0		4		
3	4.5		5	0.2	
4	4.0		6	0.2	
IC1503			7	0.2	
1	2.5		8	0.4	
2	0		9	0	
3	4.0		10	0.2	
IC1504			11	0.2	
1	0		12	2.4	
2	2.8		13	4.2	
3			14	6.2	
	5.0 4.5				
4			15	4.5	
5	5.0		16	0.2	
IC4701			17	0	
1	5.7		18	1.0	
2	5.7		19	1.7	
3	5.6		20	0	
4	0		21	3.2	
5	5.6		22	3.2	
6	5.7		23	0.2	
7	5.7		24	9.2	
8	12.0		25	3.7	
IC5101			26	9.1	
1	0		27	0	
2	5.0		28	0.3	
3	0		29	0.3	
4	0		30	5.9	
5	0		31	6.3	
	U				
6			32	3.6	
7	0		33	6.3	
8	5.2		34	8.2	
9	5.2		35	0.3	
10	5.2		36	4.3	
11	0		37	9.8	
12	2.5		38	9.0	
13	0		39	0.2	
14	2.3		40	0.2	
15	2.7		41	0.2	
16	3.4		42	0.2	
17	3.4		43	0.2	
18	2.2		44	0.2	
19	0		45	1.1	
20	2.4		46	2.7	
21			47		
	1.5			5.0	
22	0.6		48	0.2	
23	5.0		IC5351	0.0	
24	1.4	l	1	2.2	l

MODE PIN NO.	STOP	
2	0.5	1
3	2.0	1
4	0	1
5	3.2	┨
6	5.0	┨
7	1.5	┨
8	0	┨
	- 0	┨
IC5611 1	2.9	┨
2		┨
	0	┨
3	0.1	┨
4	0.1	┨
5	3.0	┨
6	4.5	┨
7	0.9	┨
8	0	┨
Q1501		t
Е	30.0	1
С	30.0	1
В	27.4	1
Q1502		1
Е	0	1
С	0	1
В	0.7	1
Q1503		1
Е	12.0	1
С	12.0	1
В	16.3	1
Q1504		1
Е	12.0	1
С	12.0	1
В	11.7	1
Q1505		1
Е	0	1
С	16.3	1
В	0	1
Q1506		1
Е	0	1
С	12.3	1
В	0.2	1
Q1507		1
E	0	1
C	0.1	1
В	0.4	1
Q1508		1
1	5.0	1
2	5.0	1
3	5.0	1
4	0.1	1
5	5.0	1
6	5.0	1
7	5.0	1
8	5.0	1
-		

_	10.LI)		
I	ION)		
	MODE PIN NO.	STOP	
	Q4701		
	E	5.7	ŀ
		5.7	
	C B	12.0 6.3	
			ŀ
	Q5010 (
	E	1.3	
	С	0	
	В	0.6	
	Q5011 (
	E	3.0	
	С	3.2	l
	В	3.6	
	Q5012 ((B, C)	
	Е	3.8	l
	С	0	
	В	3.2	Ì
	Q5013 (İ
	E	0	l
	С	0.1	
	В	0.1	
	Q5101	U	
		2.0	ŀ
	E	3.6	
	С	9.0	
	В	4.2	
	Q5104		ŀ
	Е	3.3	
	С	0	
	В	0.1	
	Q5105		
	Е	2.2	
	С	0	
	В	1.6	
	Q5107		İ
	Е	0.3	
	С	9.0	İ
	В	0.8	l
	Q5108	5.0	İ
	E	1.2	l
	С	0	l
	В	0.6	
	Q5110	0.0	
		1.4	l
	E	1.4	l
	C	9.0	l
	В	2.0	
	Q5114	0.	l
	E	2.1	l
	С	0	l
	В	1.4	l
	Q5118		l
	Е	1.8	
	С	5.0	l
	В	1.5	l
	Q5119		
	Е	2.2	İ
			l

C 0

В

Q5611

0.5

TP5609 0

MODE	STOP	MOD
PIN NO.		PIN N
В.	1.6	l E
Q5120		С
Е	1.8	В
С	4.2	Q56 ⁻
В	2.5	E
Q5121		С
Е	3.7	В
С	9.0	Q56 ⁻
В	4.2	E
Q5125		С
Е	0.8	В
С	0	Q590
В	0.1	E
Q5151		C
E	3.3	B
C	4.7	1
В	3.9	TP15
Q5152	0.0	TP15
E	4.0	TP15
C	9.0	TP15
В	4.7	TP15
Q5301	7.7	TP15
E	4.5	TP15
C	0	TP15
В	3.9	TP15
Q5302	0.0	TP15
E	4.8	TP15
C	9.0	TP15
В	5.3	TP40
Q5303	0.0	TP40
E	3.3	TP40
C	9.0	TP40
В	3.9	TP45
Q5353	5.5	TP45
E	2.0	TP50
C	3.9	TP50
,	9.0	1
DESE4	4.5	TP53
Q5354	4.4	TP53
E	1.1	TP53
С	9.0	TP53
В	0.1	TP53
Q5355		TP53
E	0	TP53
С	0.1	TP53
B 05004	4.6	TP53
Q5381		TP53
E	0	TP53
С	3.8	TP54
В	0.1	TP54
		TP55
Q5501		TP55
Q5501 E	0.1	

MODE PIN NO.	STOP		MODE PIN NO.	STOP
		ł		
E	0	-	TP5619	0
С	0			
В	4.6			
Q5612]		
E	0.1			
С	4.5			
В	0	İ		
Q5613		İ		
E	0.6	i		
C	0.2	ł		
		ł		
В	1.2			
Q5901		ļ		
E	9.1			
С	11.5			
В	9.8		L	
TP1503	12.0	1		
TP1504	0	i		
		ł		
TP1505	5.0	ł		
TP1506	0			
TP1507	30.0			
TP1508	12.0			
TP1509	5.0			
TP1510	12.0			
TP1511	5.0	İ		
TP1512	5.0	İ		
TP1513	0	i		
		ł		
TP1514	5.0	ł		
TP4001	5.6			
TP4004	5.6			
TP4011	4.8			
TP4014	4.9			
TP4591	10.1			
TP4592	10.2	l		
TP5009	0	1		
TP5019	0	1		
TP53019	3.0			
TP5302	3.1			
TP5303	3.0			
TP5304	5.0			
TP5305	4.0			
TP5307	1.5			
TP5308	2.0			
TP5310	5.5	1		
TP5311	4.2			
	3.6			
TP5312				
TP5313	0.1			
TP5401	4.0			
TP5402	0.9			
TP5501	0.7			
TP5503	1.7			
TP5504	0	1		
TP5505	0			
TP5506	5.4			
TD5600	0.4			

MAIN (C.B.A.	(SYS	СТЕМ С	CONTI	ROL
MODE	STOP		MODE PIN NO.	STOP	
PIN NO.					
IC6001			55	0.1	
1	5.2		56	4.5	
2	0		57	4.3	
3	5.2		58	0	
4	0		59	0	
5	4.8		60	0	
6	0.1		61	0	
7	0		62	0	
8	5.0		63	0	
9	0		64	0	
10	0		65	0	
11	1.7		66	4.2	
12	1.9		67	2.9	
13	0		68	2.6	
14	5.1		69	0	
15	0.1		70		
16	5.1		71	0	
17	3.9			U	
	5.2		72		
18			73	5.0	
19	5.1		74	2.6	
20	0		75 70	2.6	
21	0		76		
	0		77	0.1	
23	5.2		78	0.1	
24	0		79	0.1	
25	5.2		80	0.1	
26	5.2		81	0.1	
27	0		82	0.1	
28	5.0		83	0	
29	0.2		84	2.7	
30	0.6		85	0.1	
31	5.1		86	5.2	
32	5.1		87	0.1	
33	2.6		88	5.2	
34	5.2		89	5.2	
35	0		90	5.2	
36	5.0		91	5.2	1
37	2.4		92	5.2	
38	2.4		93	5.0	1
39	0		94	5.1	
40	0.2		95	0	
41	0.2		96	5.1	
42				5.1	
	0.2		97		
43	3.8		98	0.1	
44	5.0		99	0	l
45	4.0		100	0.1	l
46	3.8		IC6004		l
47	0		1	0	
48	0		2	0	
49	3.2		3	0	
50	2.6		4	0	
51	5.0		5	5.3	
52	2.5		6	5.2	
53	2.6		7	0	
E4	0	1	0	E 0	l

54

0

. 8	SECTIO	ON)	
	MODE	STOP	
	PIN NO.\		
	IC6005		
	1	5.2	
	2	5.0	
	3	0	
	4	0	
	5	5.0	
	6	0	
	0	0	
	Q6003		
	Е	0	l
	С	0.1	
	В	8.0	
	Q6004		l
	E	5.0	
	С	5.2	
	В	4.5	1
	Q6005		
	E	5.3	1
	С	5.0	
	В	4.4	1
	Q6006	4.4	1
		0	
	E	0	
	С	5.2	
	В	0	
	TP6001	5.2	
	TP6007		
		0	
	TP6008	0	
	TP6009	5.3	
	TP6013	5.2	
	TP6101	5.2	
	TP6103	5.1	
	TP6104	5.2	
	TP6105	1.7	
	TP6106	5.2	l
	TP6107	0.1	
	TP6109	5.1	
	TP6111	0	l
	TP6401	0	
			1
			1
			l
			1
			l
			l

COMPARISON CHART OF MODELS & MARKS

0020	
MODEL	MARK
PV-20DF62	Α
PV-27DF62	В
PV-27DF62-K	С

TV MAIN C.B.A

MODE STOP PIN NO. MODE STOP PIN NO. IC451 С 0.2 В 9.9 8.0 2 4.0 3 4.9 TP501 114.0 4 5.1 TP502 0 5 0 TP503 0.6 6 4.9 TP551 0 7 5.0 TP552 0 8 27.0 TP553 0 9 0.1 TP554 0.1 10 1.7 TP556 1.8 11 TP558 0.2 0 12 0 TP751 0 13 27.1 TP752 0 IC752 (B, C) TP802 120.0 1 3.0 TP803 120.0 2 3.7 TP853 22.0 3 3.7 TP854 0 4 TP855 0 0 5 5.3 TP856 140.0 6 0.1 7 6.9 8 12.0 IC851 1 103.1 2 102.1 3 3.4 4 0 IC852 1 140.0 2 0.1 3 0 Q431 Е 1.6 С 0 В 0.9 Q501 Е 0 C 72.0 В 0.4 Q523 E 114.5 С 0.2 B 114.0 Q571 Е 1.3 C 11.2 В 1.7 Q591 Е 0 С 11.6 В 0 Q801 E 0

Αl

MODE STOP PIN NO. C4301 12 1 5.9 13 2 5.8 14 3 5.9 15 4 5.9 16 5 0 IC43 6 0 1 7 0 2 8 0 3 9 12.0 4 10 12.0 5	0.\ 5.9 6.0 6.0 12.0
PINNO. PINNO. 12 1 5.9 2 5.8 3 5.9 4 5.9 5 0 16 6 0 1 7 0 2 8 0 9 12.0 10 12.0 5	5.9 6.0 6.0 12.0
C4301 12 1 5.9 2 5.8 3 5.9 4 5.9 5 0 6 0 7 0 8 0 9 12.0 10 12.0 5 5	5.9 6.0 6.0 12.0
1 5.9 13 2 5.8 14 3 5.9 15 4 5.9 16 5 0 1C43 6 0 1 7 0 2 8 0 3 9 12.0 4 10 12.0 5	6.0 6.0 12.0
2 5.8 14 3 5.9 15 4 5.9 16 5 0 1C43 6 0 1 7 0 2 8 0 3 9 12.0 4 10 12.0 5	6.0 12.0 52
3 5.9 4 5.9 5 0 6 0 7 0 8 0 9 12.0 4 4 5 5	12.0 52
4 5.9 16 5 0 IC43 6 0 1 7 0 2 8 0 3 9 12.0 4 10 12.0 5	12.0 52
5 0 IC43 6 0 1 7 0 2 8 0 3 9 12.0 4 10 12.0 5	52
6 0 7 0 8 0 9 12.0 4 5	
7 0 2 8 0 3 9 12.0 4 10 12.0 5	6.0
8 0 9 12.0 10 12.0 5	
9 12.0 4 10 12.0 5	6.0
10 12.0 5	6.0
	0
44 50 -	6.0
11 5.9 6	6.0
12 5.9 7	6.0
13 5.9 8	12.0
14 0 IC46	
15 5.9 1	0
16 12.0 2	4.4
C4302 3	4.4
1 6.0 4	4.4
	4.4
2 6.0 5 3 5.9 6	
	4.4
4 0 7	0
5 5.9 8	0
6 6.0 9	0
7 6.0 10	
8 12.0 11	
C4303 12	1.0
1 5.9 13	1.0
2 6.0 14	2.0
3 6.0 15	
4 6.0 16	
5 6.0 17	
6 0 18	
7 0 19	
8 0 20	
9 0 21	
10 12.0 22	
11 6.0 IC90	
12 5.9 1	4.2
13 6.0 2	4.1
14 6.0 3	3.0
15 6.0 4	9.0
16 12.0 5	1.4
C4351 6	0
1 0 7	4.2
2 0 8	4.7
3 6.0 9	1.3
4 6.0 10	
5 5.7 11	5.1
6 0.1 12	
7 0 13	
	4.2
8 0 14	10
9 11.9 15	
	4.1

MODE	STOP	
PIN NO.		
18	0.6	l
19	4.3	l
20	4.1	İ
21	1.8	Ì
22	4.2	l
23	4.2	İ
24	4.2	İ
25	4.2	Ì
26	1.8	
27	4.2	
28	4.1	
29	4.2	
30	4.2	
Q4301		
E	0	
С	12.0	
В	0	
Q4302		
Е	0	
С	12.0	l
В	0	
Q4303		
E	0	
С	12.0	l
В	0	ŀ
Q4304	_	ŀ
E	0	ŀ
С	0	
В	5.1	ŀ
Q4352	0.0	ŀ
E	6.0	ŀ
С	12.0	ŀ
B Q4353	6.6	ŀ
_	0	
E C	12.0	l
В	0	
Q4354	U	l
<u>Q4354</u>	12.0	l
C	0.2	
В	12.1	l
Q4355	14.1	l
E	0	
С	12.1	l
В	0.2	l
Q9001	U.L	
E	3.6	l
С	5.0	l
В	4.3	l
Q9002		l
E	0	l

С

В

0

8.0

MODE	STOP
PIN NO.	
Q9003	
E	1.4
C	12.0
В	2.0
Q9004	
E	1.4
C	12.0
В	2.0
	2.0
TP4201	0
TP4202	0
TP9001	6.0
TP9002	6.0
TP9002	0.0
TP9201	2.3
11 9201	2.0

TUNER MAIN

(B,C)

C.B.A.	\ IVI/\I		CRT C	BΔ	(Δ)	CRT C	RA (
		1			• '		
MODE	STOP		MODE	STOP		MODE	STOP
PIN NO.\]	PIN NO.]	PIN NO.	
IC4501			Q5051			IC351	
1	2.2		Е	2.1		1	2.1
2	2.3	i	С	9.1]	2	2.1
3	0	1	В	2.8	1	3	2.1
4	2.3		Q5052		1	4	0
5	2.2	†	E	-2.2	i 1	5	2.2
6	7.0		C	2.5		6	214.4
7	10.2		В	-1.6	1	7	180.6
8	2.3		Q5053	1.0		8	181.7
9	22.0		E	2.6	1	9	180.6
10			C	9.1		5	100.0
	0					TD46	0
11	2.3		В	3.2		TP46	
12	10.0		Q5054			TP47	-3.0
IC9551			E	2.5		TP48	0
1	0		С	-3.0		TP49	0
2	0		В	1.9		TP50	162.8
3	0		Q5057				
4	0		Е	3.2]		
5	5.4	1	С	-3.0]		
6	0	1	В	2.5	1		
7	5.9	†	Q5058		i 1		
8	12.0	†	E	1.9	i 1		
Ť		1	C	9.1	1		
Q4501		1	В	2.5			
E	0	1	Q5061		1		
			E	-3.0			
C B	0	ł	C		1		
	6.0			0			
Q4502			В	-2.8			
E	0		Q5062				
С	0		E	2.8			
В	6.0		С	9.1			
Q4503			В	3.4			
E	20.7	<u> </u>					
С	22.0		TP46	0			
В	22.0		TP47	-3.0			
			TP48	0			
TP4501	22.0	 	TP49	0]		
TP4504		i 1	TP50	162.8]		
TP4505	0	i			i 1		
TP4506	0	i			i 1		
TP4507	0	i			1		
TP9501	0	1			1		
TP9502	0	1					
TP9551	0.6	1					
TP9552	5.3						
		1			1		
TP9553	0						
TP9554	0		\vdash				
]					
]		
		i			1		
		i l			1		

COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-20DF62	Α
PV-27DF62	В
PV-27DF62-K	С

DVD DECODER

C.B.A.			
MODE PIN NO.	STOP	MODE PIN NO.	STOP
IC8000		55	0.5
1	3.6	56	0.5
2	1.5	57	0.5
3	1.3	58	0.5
4	1.2	59	3.6
5	1.4	60	0
6	1.2	61	0.5
7	1.4	62	0.5
8	0	63	0.5
9	3.6	64	0.5
10	1.9	65	0.4
11	1.3	66	0.4
12	0.3	67	0.4
13	0.2	68	3.6
14	1.2	69	0.5
15	1.7	70	0.5
16	1.7	71	0.5
17	0		
18		72 73	0.5 0.5
19	3.6	74	
	1.0		0.5
20	0.2	75	3.6
21	1.2	76	0
22	0	77	0.4
23	0	78	0.4
24	3.6	79	0.4
25	0.1	80	0.4
26	0	81	0.4
27	3.6	82	0.4
28	2.8	83	3.6
29	2.6	84	0
30	2.7	85	0.4
31	0.1	86	0.4
32	0.1	87	0.4
33	1.9	88	0.4
34	0	89	0.4
35	3.6	90	0.4
36	0.4	91	0
37	0.4	92	3.6
38	0.4	93	0.3
39	0.4	94	0.3
40	0.4	95	0.3
41	0.4	96	0.3
42	0.4	97	0.4
43	0	98	0
44	3.6	99	3.6
45	0.4	100	0.4
46	0.4	101	0.4
47	0.4	102	0.4
48	0.3	103	0
49	0.5	104	3.6
50		105	0.4
51	3.6	106	0.4
52	0	107	0.4
53	0.5	108	0.4
54	0.5	109	0.4
	2.2		<u> </u>

		ı
MODE PIN NO.	STOP	
110	0.4	
111	3.6	
112	0	
113	0.4	
114	0.3	
115	0.3	
116	0.5	
117	0.4	
118	0.3	
119	0.3	
120	0	
121	3.6	
122	0.4	
123	0.4	
124	0.4	
125	0.4	
126	0.4	
127	0.4	
128	0.4	
129	0	
130	3.6	
131	0.4	
132	0.8	
133	0.4	
134	0.4	
135	0.4	
136	0.4	
137	0.4	
138	0	
139	3.6	
140	0.4	
141	0.4	
142	0.3	
143	0.3	
144	0.2	
145	0.2	l
146	0.5	l
147	0.5	
148	3.6	l
149	0.4	l
150	0.4	l
151	0.4	l
152	0.8	l
153	0.3	
154	0.4	l
155	0.4	l
156	0.4	l
157	3.6	l
158	0.4	l
159	5.0	l
160	0.4	l
161	0.4	l
162	0.4	l
163	0.4	l
164	3.6	l
104	5.0	I

MODE	STOP
IN NO.\	
165	0.4
166	1.2
167	0.4
168	1.1
169	0.4
170	0.3
171	0.0
172	3.6
173	5.0
174	0.3
175	0.3
176	0
177	0
178	0.4
179	0.4
180	0.4
181	0.4
182	0.4
183	3.6
184	0
185	0.4
186	0.4
187	0.4
188	0.4
189	0.4
190	0.4
191	0.4
192	0
193	3.6
194	0.4
195	0.4
196	0.4
197	0.4
198	0.3
199	
200	0
201	3.6
202	
203	
204	0.3
205	0.3
206	0.4
207	0.4
208	0
C8001	
1	0
2	0
3	0
4	0
5	0.4
6	0.4
7	0
8	5.0
28002	
1	Λ

0.1

29 0

35 0.9

NODE NNO.\	STOP	MODE PIN NO.	STO
30	1.6	30	0.
31	1.5	31	0
32	1.0	32	0.
33	1.0	33	0.
34	0.2	34	0
35	3.2	35	0
36		36	0.
37	3.6	37	0.
38	1.5	38	0.
39	0	39	0.
40		40	0.
41	0	41	0.
42	0.8	42	0.
43			
	3.6	43	0
44	0.8		0.
45	0.9	IC820	
46	0	1	0
47	0.5	2	5.
48	0.5	3	3.
49	3.6	IC830	
50	0.8	1	2.
51	0.9	2	2.
52	0	3	0.
53	1.3	4	0.
54	0	5	0.
C8200		6	0.
1	0.4	7	0.
2	0.3	8	0.
3	0.3	9	
4	0.3	10	
5	0	11	0.
6	0	12	0.
7	0	13	
8	0	14	
9	0	15	0.
10	0	16	0.
11	0.4	17	0.
12	0	18	0.
13	0	19	0.
14	0	20	0
15	0.3	21	0
16	0.3	22	0
17	0.4	23	0
18	0	24	0.
19	0	25	0.
20	0.4	26	3.
21	0.4	27	0
22	0.1	28	3.
23	0.1	29	0.
24	0.4	30	- U.
25	0.4	30	0.
			0.
26	0	32	
27	0	33	1.
28	0.4	34	

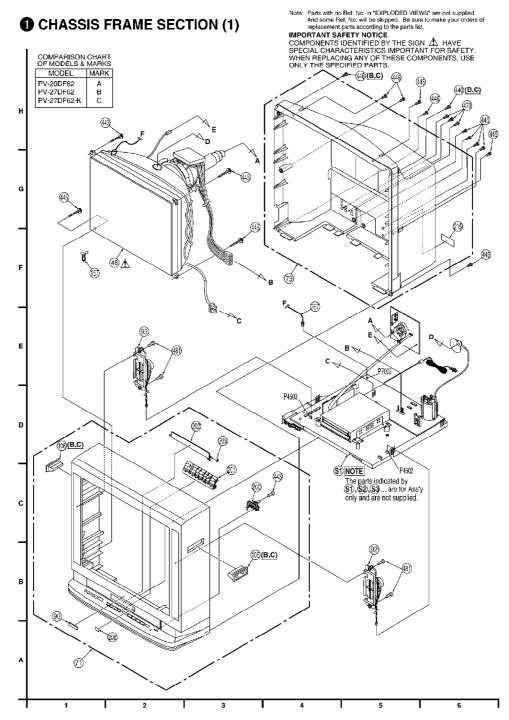
DE NO.\	STOP	MODE PIN NO.	STOP	
				l
30	0.4	36		
31	0	37	3.6	
32	0.3	38	0.9	
3	0.1	39		
34	0	40	0.2	
25	0	41		
36	0.3	42	0.9	
37	0.3	43		
 88	0.3	44	0	
2 39	0.3	45	0	
~ Ю	0.3	46	0	
11		47		
	0.3		0	
12	0.4	48	0	ĺ
13	0	IC8401		1
4	0.4	1	6.1	
201		2	6.1	
1	0	3	6.1	
2	5.1	4	0	
3	3.7	5	6.1	
301		6	6.1	
1	2.2	7	6.1	
	2.5	8	12.2	
2 3 4	0.1	IC8403		
<u>о</u> 1	0.6	1	0.4	
	0.0	2	0.4	
5				
6	0.6	3	5.0	
7	0.6	4		
8	0.6	5		
9		6	0.3	
0		7	0.3	
1	0.6	8	0.3	
2	0.1	9	0.3	
3		10	0.3	
4		11	0.1	
5	0.4	12	0	l
6	0.6	13	5.0	
7	0.1	14	0	
8	0.1	15	0.3	
9	0.1	16	0.4	1
20	0	17	0.4	
21	0	18	0.4	
2	0	19		
23	0	20		
24	0.1	21	5.0	
25	0.9	22	0	
26	3.6	23	0	
27	0	24	0	
28	3.6	IC8502		l
29	0.9	1	0	
	0.3	2		l
30			0.3	
31	0.8	3	0.5	1
32		4	0	1
ß	1.0	5	0.3	
34		6	0.5	

MODE	STOP	
PIN NO.		
8		
9	0	
10	0	
11	0.4	
12	0.3	
13	0	
14	3.6	
00000		
Q8000	0.7	
E	0.7	
С	0.7	
B	0.5	
Q8003	0	
E C	0	
В	4.0	
Q8200	7.0	
E	0.1	
C	0	
В	0.5	
Q8201		
Е	0.3	
С	0	
В	0.2	
Q8202		
Е	0.3	
С	0	
В	0.5	
Q8204		
Е	0	
С	0	
В	0.1	
Q8205		
E C	0.1	
	0	
B Q8206	0.4	
Q8206	0	
C	0	
В	0	
Q8207	-	
E	1.9	
C	0	
В	0.6	
Q8208		
Е	1.6	
С	0	
В	0.9	
TP8000	0.4	
TP8001	0.1	
TP8002	3.6	
TP8003	0.4	
TP8004	0.4	

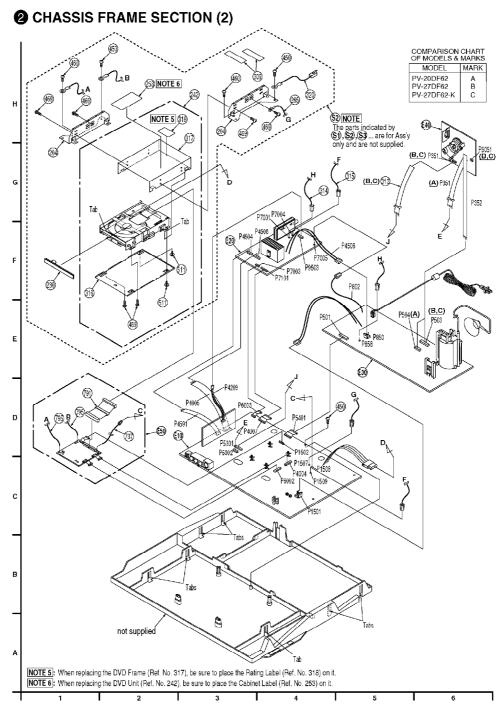
TP8005 0.3

MODE	STOP	\MODE	STOP
PIN NO.	0101	PIN NO.	0101
H - 1	0.5	l - 1	0.4
TP8006	0.5	TP8062	0.4
TP8007	0.1	TP8063	0.4
TP8008	0.2	TP8065	0.1
TP8009	0.3	TP8068	0.5
TP8010	0.2	TP8069	0
TP8011	0.2	TP8070	0.1
TP8012	5.0	TP8071	0.1
TP8013	0.7	TP8072	0.1
TP8014	0	TP8100	3.6
TP8015	0.4	TP8200	0.6
TP8016	0	TP8201	0
TP8017	0	TP8202	0.5
TP8018	0.4	TP8203	0
TP8019	4.4	TP8204	0.1
TP8020	0.4	TP8205	0.4
TP8021	0	TP8206	0.1
TP8022	5.0	TP8207	0.1
TP8023	0.1	TP8208	0.1
TP8024	0	TP8209	0
TP8025	0.2	TP8210	0.4
TP8026	0.4	TP8211	0.4
TP8027	0.1	TP8212	0.4
TP8028	0	TP8213	0.4
TP8029	0	TP8214	0.1
TP8030	0.4	TP8215	0.1
TP8031	0.3	TP8216	0.1
TP8032	0.3	TP8300	0.1
TP8033	0.3	TP8301	3.6
TP8034	0.3	TP8302	0.4
TP8035	0.4	TP8303	0.4
TP8036	0.4	TP8304	0.4
TP8037	0.1	TP8305	0.4
TP8038	0	TP8306	0.4
TP8039	0.1	TP8307	0.4
TP8040	0.4	TP8308	0.4
TP8041	0.4	TP8309	0.4
TP8042	0.4	TP8310	0.4
TP8043	0	TP8311	0.1
TP8044	0.4	TP8312	0.3
TP8045	0	TP8313	0.3
TP8046	0.1	TP8315	0.1
TP8047	0	TP8316	0
TP8048	0	TP8317	0
TP8049	0	TP8318	0.1
TP8051	5.0	TP8319	0
TP8052	0.4	TP8320	0
TP8053	0.1	TP8321	0.5
TP8054	0.1	TP8322	0
TP8055	0.3	TP8323	0.5
TP8056	0.1	TP8324	0.5
TP8057	0.1	TP8325	0.1
TP8058	0.1	TP8326	0
TP8059	0.1	TP8327	0.1
TP8060	0.1	TP8328	0
TP8061	0.1	TP8329	0.4
5501	J. 1	11 0020	0.7

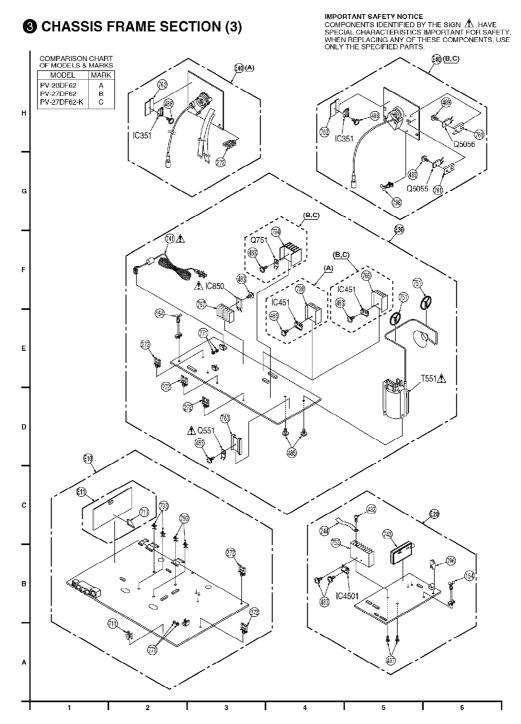
MODE	STOP
PIN NO.	5.5.
TP8330	0.1
	0.1
TP8331	0.1
TP8332	0
TP8334	0
TP8335	0
TP8398	0.5
TP8399	0.5
TP8400	0.1
TP8401	0.1
TP8405	0
TP8407	0
TP8408	0.1
TP8415	0.3
TP8416	0.2
TP8417	0
TP8418	0
TP8419	0
TP8420	0
TP8421	0.4
TP8422	0.4
TP8423	0
TP8424	0
TP8501	0.3
TP8502	0.1
TP8503	0.1
TP8504	0.4
TP8505	0.1
TP8506	0.3



11.2. CHASSIS FRAME SECTION (2)

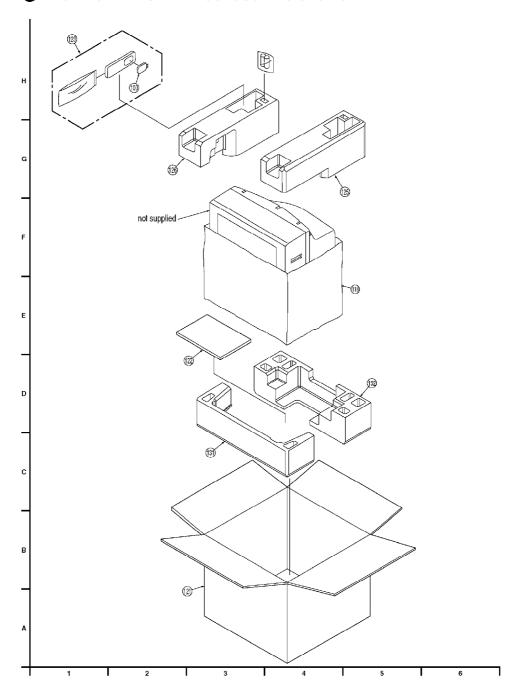


11.3. CHASSIS FRAME SECTION (3)



11.4. PACKING PARTS AND ACCESSORIES SECTION

4 PACKING PARTS AND ACCESSORIES SECTION



12. REPLACEMENT PARTS LISTS

BEFORE REPLACING PARTS, READ THE FOLLOWING:

12.1. REPLACEMENT NOTES

12.1.1. General Notes

1. Use only original replacement parts:

To maintain original function and reliability of repaired units, use

only original replacement parts which are listed with their part numbers in the parts list.

2. IMPORTANT SAFETY NOTICE

Components identified by the sign \triangle have special characteristics important for safety. When replacing any of these components, use only the specified parts.

3. SPECIAL NOTE

All integrated circuits and many other semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the "ELECTROSTATICALLY SENSITIVE (ES) DEVICES" section of this service manual.

- 4. Parts with no Ref. No. in "EXPLODED VIEWS" are not supplied.
 And some Ref. No. will be skipped. Be sure to make your orders of replacement parts according to the parts list.
- 5. Parts different in shape or size may be used. However, only interchangeable parts will be supplied as service replacement parts.
- 6. Parts with mark "AVC" in Remarks column are supplied from AVC. Others are supplied from MKA.
- 7. Item numbers with capital letter E (Example: E10, E20,) in the Ref. No. column are shown in the exploded views.
- 8. Parts whose Ref. Nos. are the same are interchangeable as replacement parts. Any of these parts may be ordered and used as a replacement part.
- 9. Section No. of parts shown in Exploded Views are indicated in the Remarks column.
- 10. The Infrared Remote Control Unit (Ref. No. 123) replacement part is available as a complete assembly unit only. Do not try to disassemble the Infrared Remote Control Unit. However, the battery cover is available separately as a replacement part.
- 11. When replacing the DVD Frame (Ref. No. 317), be sure to place the Rating Label (Ref. No. 318) on it.
- 12. When replacing the DVD Unit (Ref. No. 242), be sure to place the

Cabinet Label (Ref. No. 253) on it.

12.1.2. Electrical Replacement Notes

1. Unless otherwise specified; All resistors are in Ω , K = 1,000 Ω , M = 1,000 k Ω .

2. Abbreviation

RTL:

Retention Time Limited

This indicates that the retention time is limited for this item. After the discontinuation of this item in production, it will no longer be available.

NR:

Non Repairable Board Ass'y

MGF CHIP:

Metal Glaze Film Chip

C CHIP:

Ceramic Chip

COMPLX CMP:

Complex Component

W FLMPRF:

Wirewound Flameproof

C.B.A.:

Circuit Board Assembly

P.C.B.:

Printed Circuit Board

E.S.D.:

Electrostatically Sensitive Devices

3. SERVICE OF CHIP PARTS

When servicing chip parts, please use a soldering iron of less than 30 W.

- 4. When replacing 0 Ω resistor, a wire can be substituted for it.
- 5. Since the UHF/VHF TUNER/TV DEMODULATOR UNIT (Ref. No. 743) has already been pre-adjusted at the factory, do not try to

- adjust the UHF/VHF TUNER/TV DEMODULATOR UNIT. The UHF/VHF TUNER/TV DEMODULATOR UNIT replacement part is available as a complete assembly unit only.
- 6. EEP ROM IC (IC8001), DVD Decoder C.B.A. replacement note: After replacing EEP ROM IC (IC8001) or DVD Decoder C.B.A., confirm the Firmware version of DVD using Self-Diagnostic function. If the version is different than that indicated on the Firmware Disc, update it using the Firmware Disc. Refer to "HOW TO UPDATE THE FIRMWARE OF DVD."

COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-20DF62	Α
PV-27DF62	В
PV-27DF62-K	С

12.2. MECHANICAL REPLACEMENT PARTS LIST

COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-20DF62	Α
PV-27DF62	В
PV-27DF62-K	С

MECHANICAL REPLACEMENT PARTS

Ref. No.	Part No.	Part Name & Description	Remarks
<u>48</u>	LXQVB1202F2	COLOR PICTURE TUBE UNIT (A)	1 A
48	LXQVB1272F2	COLOR PICTURE TUBE UNIT (B C)	₁ 🛆
<u>71</u>	LXQKY1202F2	FRONT CABINET ASS'Y (A)	1
71	LXQKY1272F2	FRONT CABINET ASS'Y (B,C)	1
<u>73</u>	LXQKV1202F2	REAR COVER UNIT (A)	1
73	LXQKV1272F2	REAR COVER UNIT (B)	1
73	LXQKV1272F2K	REAR COVER UNIT (C)	1
90	TBMA003	BADGE,ABS RESIN (A)	1
90	TBMA008	BADGE,ABS RESIN (B,C)	1
92	LXQAS02200FU	SPEAKER UNIT R	1
93	LXQAS02270FU	SPEAKER UNIT L	1
<u>100</u>	VKFS2235	BATTERY COVER	4
<u>106</u>	LSKH0055	HANDLE (B,C)	1
<u>118</u>	LPE64005A	BAG,POLYETHYLENE	4
<u>121</u>	LSPG1336	PACKING CASE,PAPER (A)	4
121	LSPG1337	PACKING CASE,PAPER (B,C)	4
122	LSQT0581A	INSTRUCTION BOOK (A,B)	4
122	LSQF0587	FAN BAG (C)	4
<u>123</u>	LSSQ0346	INFRARED REMOTE CONTROL UNIT	4
<u>125</u>	LSPN0181	TOP CUSHION RIGHT STYROFOAM (A)	4
125	LSPN0177	TOP CUSHION RIGHT STYROFOAM (B C)	4
<u>126</u>	LSPN0180	TOP CUSHION LEFT STYROFOAM (A)	4
126	LSPN0176	TOP CUSHION LEFT STYROFOAM (B C)	4

Ref. No.	Part No.	Part Name & Description	Remarks
<u>131</u>	LSPN0178	BOTTOM CUSHION FRONT STYROFOAM (A)	4
131	LSPN0174	BOTTOM CUSHION FRONT STYROFOAM (B C)	4
132	LSPN0179	BOTTOM CUSHION REAR STYROFOAM (A)	4
132	LSPN0175	BOTTOM CUSHION REAR STYROFOAM (B C)	4
<u>154</u>	TMM5439-1	CLAMPER	3
<u>157</u>	TMM77409	PURSE LOCK CLAMPER	1
<u>200</u>	LSGL0377	PANEL LIGHT	1
<u>201</u>	LSGU0531	DVD OPERATION BUTTON	1
<u>202</u>	LXQKF1272F2	DVD DISK DOOR UNIT	1
<u>203</u>	LSMB0170	DVD CASSETTE DOOR SPRING	1
<u>204</u>	LSMA0612	DVD MOUNT PLATE,STEEL	2
<u>208</u>	TMK77708	CUSHION,RUBBER	1
<u>215</u>	LSQL1180	DOLBY DIGITAL CAUTION LABEL	1
230	LSKF0325	TRAY COVER	1
242	LSXK0088	DVD UNIT	2
244	TUX77809	CLAMPER	3
<u>253</u>	LQF62003A	CABINET LABEL (A)	2
253	LSQL0999	CABINET LABEL (B,C)	2
<u> 265</u>	VEKS5797	CONNECTOR CABLE W/PLUG 0V	2
267	VEKS5874	FM RADIO ANTENNA CORD,0V	1
272	TMM77412	CLAMPER	3
309	LMK20011A	SHEET,NYLON-RAYON	2
<u>313</u>	VEKS5860	CONNECTOR CABLE W/PLUG DC 12V (B C)	2
314	VEKS5865	GROUNDING WIRE	2
<u>315</u>	VEKS5866	GROUNDING WIRE	2
316	LSXA0415	LOWER SHIELD ASS'Y	2
317	LMMK0201	DVD FRAME	2
318	LSQL1260	RATING LABEL	2
320	VEKS5872	GROUNDING WIRE	2
432	XTV3+8JR	TAPPING SCREW,STEEL	2
432	XTV3+8JR	TAPPING SCREW,STEEL	3
443	XTV4+12A	TAPPING SCREW,STEEL	1
445	LHT60002Y	SCREW,STEEL (A)	1
445	LHT60001Y	SCREW W/WASHER STEEL (B C)	1
446	XTV4+16A	TAPPING SCREW,STEEL	1
<u></u> 450	VHDS0309	SCREW,STEEL	2
460	XTN4+12A	TAPPING SCREW,STEEL	2
469	XSN3+6	SCREW,STEEL	2
<u>470</u>	XTV3+10G	TAPPING SCREW,STEEL	1
<u>481</u>	XTW4+Z15D	TAPPING SCREW,STEEL	1
483	XYN3+F10S	SCREW W/WASHER,STEEL	3
<u>485</u>	XYE3+EJ10	SCREW W/WASHER,STEEL	3
488	XYN3+F6S	SCREW W/WASHER,STEEL	3
<u>489</u>	XYN3+F8S	SCREW W/WASHER,STEEL	3
497	XTV3+10J	TAPPING SCREW,SCREW	3
511	XYC26+CF8	SCREW W/WASHER,STEEL	2
<u>711</u>	PNA4611M00HC	INFRARED RECEIVER UNIT	3
<u>713</u>	VMAS1912	P.C.B. SUPPORT ANGLE	3
	LUS63008A	HEAT SINK (A)	3
728 737		, ,	2
<u>737</u> 741	VEKS5836	CONNECTOR CABLE W/PLUG 0V	
<u>741</u>	LSJA0343	AC CORD W/PLUG,120V	з 🗥
741	LSJA0364	AC CORD W/PLUG,120V	3 <u>A</u>
<u>743</u>	ENG36709GL	TUNER,UHF/VHF NR	3

Ref. No.	Part No.	Part Name & Description	Remarks
<u>751</u>	LML69001A	ANODE LEAD CLAMPER	3
<u>753</u>	LSSC0256	AUDIO OUTPUT HEAT SINK	3
<u>760</u>	TUC77628	HEAT SINK	3
<u>761</u>	TUC15717	HEAT SINK	3
762	TUC76649-4	HEAT SINK	3
<u>765</u>	LSSC0254	VERTICAL HEAT SINK (B,C)	3
<u>771</u>	EYF52BC	FUSE HOLDER	3
<u>791</u>	VEKS5773	CONNECTOR CABLE W/PLUG DC 5V	2
<u>793</u>	LSMP0354	PCB SUPPORTER	3
<u>794</u>	TUC15776	HEAT SINK (B,C)	3
795	LSEK0453	GROUNDING WIRE	2
796	LSEQ0647	SHIELD PLATE UNIT	3
<u>797</u>	LSSC0562	HEAT SINK	3
<u>798</u>	TMM7464-1R	CLAMPER	3
E10	LSEP2055B	MAIN C.B.A. (A)	2,3 RTL
E10	LSEP2055A	MAIN C.B.A. (B,C)	2,3 RTL
E11	LSEP2029B	AUDIO C.B.A.	3 RTL
E20	LSEP2057A	TUNER MAIN C.B.A.	2,3 RTL
E30	LSEP2056B	TV MAIN C.B.A. (A)	2,3 RTL
E30	LSEP2056A	TV MAIN C.B.A. (B,C)	2,3 RTL
<u>E40</u>	LRP63013D	CRT C.B.A. (A)	2,3 RTL
E40	LRP63021C	CRT C.B.A. (B,C)	2,3 RTL
E50	LSEP2007C	DVD DECODER C.B.A.	2 RTL

SERVICE FIXTURES AND TOOLS

Ref. No.	Part No.	Part Name & Description	Remarks
	DVDT-S01	DVD TEST DISC	AVC
	LSUA0034	EXTENSION CABLE	

12.3. ELECTRICAL REPLACEMENT PARTS LIST

COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-20DF62	Α
PV-27DF62	В
PV-27DF62-K	С

PRINTED CIRCUIT BOARD ASSEMBLY

Ref. No.	Part No.	Part Name & Description	Remarks
E10	LSEP2055B	MAIN C.B.A. (A)	E.S.D. RTL
E10	LSEP2055A	MAIN C.B.A. (B,C)	E.S.D. RTL
E11	LSEP2029B	AUDIO C.B.A.	E.S.D. RTL
E20	LSEP2057A	TUNER MAIN C.B.A.	RTL
E30	LSEP2056B	TV MAIN C.B.A. (A)	E.S.D. RTL
E30	LSEP2056A	TV MAIN C.B.A. (B,C)	E.S.D. RTL
E40	LRP63013D	CRT C.B.A. (A)	RTL
E40	LRP63021C	CRT C.B.A. (B,C)	RTL
E50	LSEP2007C	DVD DECODER C.B.A.	E.S.D. RTL

12.3.1. MAIN C.B.A.

COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-20DF62	Α
PV-27DF62	В
PV-27DF62-K	С

INTEGRATED CIRCUITS

Ref. No.	Part No.	Part Name & Description	Remarks
IC1501	C5HABZZ00101	IC, LINEAR	Δ
IC1502	0N3131-R.KT	IC, LINEAR	Δ
IC1502	0N3131-S.KT	IC, LINEAR	Δ
IC1503	TA76431ASTP6	IC, LINEAR	
IC1503	B1AZKD000001	IC, LINEAR	
IC1503	C0DAEMZ00001	IC, LINEAR	
IC1504	SI-3050F	IC, LINEAR	
IC4701	UPC4570G	IC, LINEAR	
IC5101	MN82840	IC, LOGIC(OTHER)	E.S.D.
IC5301	AN5368FB	IC, LINEAR	
IC5351	C1AB00000402	IC, LINEAR	
IC5611	C1AB00001518	IC, LINEAR	
IC5611	C1AB00000399	IC, LINEAR	
IC6001	MN101D06FCM	IC, 8BIT MICROCONTROLLER	E.S.D.
IC6004	LSSK0006	IC, 1K EEP ROM (A)	E.S.D.
IC6004	LSSK0005	IC, 1K EEP ROM (B,C)	E.S.D.
IC6005	C0EBJ0000080	IC, CMOS STANDARD LOGIC	E.S.D.
IC6005	C0EBJ0000099	IC, CMOS STADNARD LOGIC	E.S.D.
IC6005	RN5VS47CA-TR	IC, CMOS STANDARD LOGIC	E.S.D.

TRANSISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
Q1501	2SB1218A0L	TRANSISTOR SI PNP CHIP	
Q1501	B1ADCF000063	TRANSISTOR SI PNP CHIP	
Q1502	2SD1819A0L	TRANSISTOR SI NPN CHIP	
Q1502	B1ABCF000020	TRANSISTOR SI NPN CHIP	
Q1503	2SD2375-PQ	TRANSISTOR SI NPN	
Q1503	B1BACG000020	TRANSISTOR SI NPN	
Q1503	2SD2396-K	TRANSISTOR SI NPN	
Q1504	2SD2159-T	TRANSISTOR SI NPN	
Q1504	2SD1581-T	TRANSISTOR SI NPN	
Q1505	2SD601-RS	TRANSISTOR SI NPN CHIP	
Q1505	B1ABCF000011	TRANSISTOR SI NPN CHIP	
Q1506	2SD601-RS	TRANSISTOR SI NPN CHIP	
Q1506	B1ABCF000011	TRANSISTOR SI NPN CHIP	
Q1507	2SD0601A0L	TRANSISTOR SI NPN CHIP	
Q1507	B1ABCF000011	TRANSISTOR SI NPN CHIP	
Q1508	XP132A1275SR	TRANSISTOR FET	
Q4701	2SD0601A0L	TRANSISTOR SI NPN CHIP	
Q4701	B1ABCF000011	TRANSISTOR SI NPN CHIP	
Q5010	2SB1218A0L	TRANSISTOR SI PNP CHIP (B,C)	
Q5010	B1ADCF000063	TRANSISTOR SI PNP CHIP (B,C)	
Q5011	2SD1819A0L	TRANSISTOR SI NPN CHIP (B,C)	
Q5011	B1ABCF000020	TRANSISTOR SI NPN CHIP (B,C)	

Q5012 2SB1218A0L TRANSISTOR SI PNP CHIP (B,C) Q5012 B1ADCF000063 TRANSISTOR SI NPN CHIP (B,C) Q5013 2SD1819A0L TRANSISTOR SI NPN CHIP (B,C) Q5013 B1ABCF000020 TRANSISTOR SI NPN CHIP (B,C) Q5101 2SD1819A0L TRANSISTOR SI NPN CHIP Q5104 2SB1218ARS TRANSISTOR SI NPN CHIP Q5105 2SB1218A0L TRANSISTOR SI PNP CHIP Q5105 2SB1218A0L TRANSISTOR SI NPN CHIP Q5107 2SD1819A0L TRANSISTOR SI NPN CHIP Q5107 2SD1819A0L TRANSISTOR SI NPN CHIP Q5108 2SB1218A0L TRANSISTOR SI NPN CHIP Q5108 2SB1218A0L TRANSISTOR SI NPN CHIP Q5108 2SB1218A0L TRANSISTOR SI NPN CHIP Q5110 2SD1819A0L TRANSISTOR SI NPN CHIP Q5114 2SB1218A0L TRANSISTOR SI NPN CHIP Q5118 2SD1819A0L TRANSISTOR SI NPN CHIP Q5119 2SB1218A0L TRANSISTOR SI NPN CHIP Q5119 2SD1819A0L TRANSISTOR SI NPN CHIP Q5121	Ref. No.	Part No.	Part Name & Description	Remarks
Q5013 25D1819A0L TRANSISTOR SI NPN CHIP (B,C) Q5010 25D1819A0L TRANSISTOR SI NPN CHIP Q5101 25D1819A0L TRANSISTOR SI NPN CHIP Q5101 25D1819A0L TRANSISTOR SI NPN CHIP Q5104 25B1218ARS TRANSISTOR SI NPN CHIP Q5105 25B1218A0L TRANSISTOR SI NPN CHIP Q5107 25D1819A0L TRANSISTOR SI NPN CHIP Q5107 25D1819A0L TRANSISTOR SI NPN CHIP Q5108 25B1218A0L TRANSISTOR SI NPN CHIP Q5108 25B1218A0L TRANSISTOR SI NPN CHIP Q5108 25B1218A0L TRANSISTOR SI NPN CHIP Q5110 25D1819A0L TRANSISTOR SI NPN CHIP Q5110 25B1218A0L TRANSISTOR SI NPN CHIP Q5114 25B1218A0L TRANSISTOR SI NPN CHIP Q5118 25D1819A0L TRANSISTOR SI NPN CHIP Q5118 25B1218A0L TRANSISTOR SI NPN CHIP Q5120 25D1819A0L TRANSISTOR SI NPN CHIP Q5121 25D1819A0L TRANSISTOR SI NPN CHIP Q5121 25D1819A0L <td>Q5012</td> <td>2SB1218A0L</td> <td>TRANSISTOR SI PNP CHIP (B,C)</td> <td></td>	Q5012	2SB1218A0L	TRANSISTOR SI PNP CHIP (B,C)	
Q5013 B1ABCF000020 TRANSISTOR SI NPN CHIP (B,C) Q5101 2SD1819A0L TRANSISTOR SI NPN CHIP Q5104 2SB121BARS TRANSISTOR SI NPN CHIP Q5104 2SB121BARS TRANSISTOR SI PNP CHIP Q5105 2SB121BARDL TRANSISTOR SI PNP CHIP Q5105 2SB121BA0L TRANSISTOR SI PNP CHIP Q5107 2SD1819A0L TRANSISTOR SI PNP CHIP Q5108 2SB121BA0L TRANSISTOR SI PNP CHIP Q5108 B1ADCF000063 TRANSISTOR SI PNP CHIP Q5108 B1ADCF000063 TRANSISTOR SI PNP CHIP Q5110 2SD1819A0L TRANSISTOR SI PNP CHIP Q5111 2SD1819A0L TRANSISTOR SI PNP CHIP Q5114 2SB121BA0L TRANSISTOR SI PNP CHIP Q5118 B1ABCF000020 TRANSISTOR SI PNP CHIP Q5119 2SB121BA0L TRANSISTOR SI PNP CHIP Q5119 2SB121BA0L TRANSISTOR SI PNP CHIP Q5120 2SD1819A0L TRANSISTOR SI PNP CHIP Q5121 2SD1819A0L TRANSISTOR SI PNP CHIP Q5125 2B1AB	Q5012	B1ADCF000063	TRANSISTOR SI PNP CHIP (B,C)	
Q5101 2SD1819A0L TRANSISTOR SI NPN CHIP Q5104 2SB1218ARS TRANSISTOR SI NPN CHIP Q5105 2SB1218ARS TRANSISTOR SI PNP CHIP Q5105 2SB1218AOL TRANSISTOR SI PNP CHIP Q5105 B1ADCF000063 TRANSISTOR SI PNP CHIP Q5107 2SD1819AOL TRANSISTOR SI NPN CHIP Q5108 2SB1218AOL TRANSISTOR SI PNP CHIP Q5108 2SB1218AOL TRANSISTOR SI PNP CHIP Q5109 2SD1819AOL TRANSISTOR SI PNP CHIP Q5110 2SD1819AOL TRANSISTOR SI PNP CHIP Q5114 2SB1218AOL TRANSISTOR SI PNP CHIP Q5114 2SB1218AOL TRANSISTOR SI PNP CHIP Q5118 2SD1819AOL TRANSISTOR SI PNP CHIP Q5118 2SD1819AOL TRANSISTOR SI PNP CHIP Q5119 2SB1218AOL TRANSISTOR SI PNP CHIP Q5120 2SD1819AOL TRANSISTOR SI PNP CHIP Q5121 2SD1819AOL TRANSISTOR SI NPN CHIP Q5122 2SB1218AOL TRANSISTOR SI NPN CHIP Q5125 2SB1218AOL	Q5013	2SD1819A0L	TRANSISTOR SI NPN CHIP (B,C)	
Q5101 B1ABCF000020 TRANSISTOR SI NPN CHIP Q5104 2SB1218ARS TRANSISTOR SI PNP CHIP Q5105 2SB1218A0L TRANSISTOR SI PNP CHIP Q5105 B1ADCF000063 TRANSISTOR SI PNP CHIP Q5107 2SD1819A0L TRANSISTOR SI NPN CHIP Q5107 B1ABCF000020 TRANSISTOR SI NPN CHIP Q5108 2SB1218A0L TRANSISTOR SI PNP CHIP Q5108 B1ADCF000063 TRANSISTOR SI NPN CHIP Q5110 2SD1819A0L TRANSISTOR SI NPN CHIP Q5114 2SB1218A0L TRANSISTOR SI NPN CHIP Q5118 2SD1819A0L TRANSISTOR SI NPN CHIP Q5118 2SD1819A0L TRANSISTOR SI NPN CHIP Q5119 2SB1218A0L TRANSISTOR SI NPN CHIP Q5119 2SB1218A0L TRANSISTOR SI NPN CHIP Q5120 2SD1819A0L TRANSISTOR SI NPN CHIP Q5121 2SD1819A0L TRANSISTOR SI NPN CHIP Q5121 2SD1819A0L TRANSISTOR SI NPN CHIP Q5125 2SB1218A0L TRANSISTOR SI NPN CHIP Q5152 2SB1219A0L </td <td>Q5013</td> <td>B1ABCF000020</td> <td>TRANSISTOR SI NPN CHIP (B,C)</td> <td></td>	Q5013	B1ABCF000020	TRANSISTOR SI NPN CHIP (B,C)	
Q5104 2SB1218ARS TRANSISTOR SI PNP CHIP Q5105 2SB1218A0L TRANSISTOR SI PNP CHIP Q5105 B1ADCF000063 TRANSISTOR SI PNP CHIP Q5107 2SD1819A0L TRANSISTOR SI NPN CHIP Q5108 2SB1218A0L TRANSISTOR SI PNP CHIP Q5108 2SB1218A0L TRANSISTOR SI PNP CHIP Q5110 2SD1819A0L TRANSISTOR SI PNP CHIP Q5110 2SD1819A0L TRANSISTOR SI PNP CHIP Q5110 B1ABCF000020 TRANSISTOR SI PNP CHIP Q5114 2SB1218A0L TRANSISTOR SI PNP CHIP Q5118 2SD1819A0L TRANSISTOR SI PNP CHIP Q5118 2SD1819A0L TRANSISTOR SI PNP CHIP Q5119 2SB1218A0L TRANSISTOR SI PNP CHIP Q5120 2SD1819A0L TRANSISTOR SI PNP CHIP Q5121 2SD1819A0L TRANSISTOR SI NPN CHIP Q5121 2SD1819A0L TRANSISTOR SI NPN CHIP Q5125 2B1218A0L TRANSISTOR SI NPN CHIP Q5125 2B1ADCF000020 TRANSISTOR SI NPN CHIP Q5151 2SD1819A0L <td>Q5101</td> <td>2SD1819A0L</td> <td></td> <td></td>	Q5101	2SD1819A0L		
Q5105 2SB1218A0L TRANSISTOR SI PNP CHIP Q5105 B1ADCF000063 TRANSISTOR SI PNP CHIP Q5107 2SD1819A0L TRANSISTOR SI NPN CHIP Q5107 B1ABCF000020 TRANSISTOR SI NPN CHIP Q5108 2SB1218A0L TRANSISTOR SI PNP CHIP Q5108 B1ADCF000063 TRANSISTOR SI PNP CHIP Q5110 2SD1819A0L TRANSISTOR SI PNP CHIP Q5111 2SB1218A0L TRANSISTOR SI PNP CHIP Q5114 2SB1218A0L TRANSISTOR SI PNP CHIP Q5114 2SB1819A0L TRANSISTOR SI PNP CHIP Q5118 2SD1819A0L TRANSISTOR SI PNP CHIP Q5119 2SB1218A0L TRANSISTOR SI PNP CHIP Q5119 2SB1218A0L TRANSISTOR SI PNP CHIP Q5120 2SD1819A0L TRANSISTOR SI NPN CHIP Q5121 2SD1819A0L TRANSISTOR SI NPN CHIP Q5121 2SD1819A0L TRANSISTOR SI NPN CHIP Q5125 2SB1218A0L TRANSISTOR SI NPN CHIP Q5151 2SD1819A0L TRANSISTOR SI NPN CHIP Q5152 2SD1819A0L <td>Q5101</td> <td>B1ABCF000020</td> <td>TRANSISTOR SI NPN CHIP</td> <td></td>	Q5101	B1ABCF000020	TRANSISTOR SI NPN CHIP	
Q5105 2SB1218A0L TRANSISTOR SI PNP CHIP Q5105 B1ADCF000063 TRANSISTOR SI PNP CHIP Q5107 2SD1819A0L TRANSISTOR SI NPN CHIP Q5107 B1ABCF000020 TRANSISTOR SI NPN CHIP Q5108 2SB1218A0L TRANSISTOR SI PNP CHIP Q5108 B1ADCF000063 TRANSISTOR SI PNP CHIP Q5110 2SD1819A0L TRANSISTOR SI PNP CHIP Q5111 2SB1218A0L TRANSISTOR SI PNP CHIP Q5114 2SB1218A0L TRANSISTOR SI PNP CHIP Q5114 2SB1819A0L TRANSISTOR SI PNP CHIP Q5118 2SD1819A0L TRANSISTOR SI PNP CHIP Q5119 2SB1218A0L TRANSISTOR SI PNP CHIP Q5119 2SB1218A0L TRANSISTOR SI PNP CHIP Q5120 2SD1819A0L TRANSISTOR SI NPN CHIP Q5121 2SD1819A0L TRANSISTOR SI NPN CHIP Q5121 2SD1819A0L TRANSISTOR SI NPN CHIP Q5125 2SB1218A0L TRANSISTOR SI NPN CHIP Q5151 2SD1819A0L TRANSISTOR SI NPN CHIP Q5152 2SD1819A0L <td></td> <td>2SB1218ARS</td> <td></td> <td></td>		2SB1218ARS		
Q5105 B1ADCF000063 TRANSISTOR SI PNP CHIP Q5107 2SD1819A0L TRANSISTOR SI NPN CHIP Q5107 B1ABCF000020 TRANSISTOR SI PNP CHIP Q5108 2SB1218A0L TRANSISTOR SI PNP CHIP Q5108 B1ADCF000063 TRANSISTOR SI PNP CHIP Q5110 2SD1819A0L TRANSISTOR SI PNP CHIP Q5114 2SB1218A0L TRANSISTOR SI PNP CHIP Q5114 B1ADCF000063 TRANSISTOR SI PNP CHIP Q5118 2SD1819A0L TRANSISTOR SI PNP CHIP Q5118 B1ABCF000020 TRANSISTOR SI PNP CHIP Q5118 B1ABCF000020 TRANSISTOR SI PNP CHIP Q5119 B1ADCF000063 TRANSISTOR SI PNP CHIP Q5120 2SD1819A0L TRANSISTOR SI PNP CHIP Q5121 2SD1819A0L TRANSISTOR SI NPN CHIP Q5121 2SD1819A0L TRANSISTOR SI NPN CHIP Q5121 2SD1819A0L TRANSISTOR SI PNP CHIP Q5125 2SB1218A0L TRANSISTOR SI NPN CHIP Q5151 B1ABCF000020 TRANSISTOR SI NPN CHIP Q5152 B1AB				
Q5107 2SD1819A0L TRANSISTOR SI NPN CHIP Q5107 B1ABCF000020 TRANSISTOR SI NPN CHIP Q5108 2SB1218A0L TRANSISTOR SI PNP CHIP Q5108 B1ADCF000063 TRANSISTOR SI PNP CHIP Q5110 2SD1819A0L TRANSISTOR SI NPN CHIP Q5114 2SB1218A0L TRANSISTOR SI NPN CHIP Q5114 B1ADCF000063 TRANSISTOR SI PNP CHIP Q5114 B1ADCF000063 TRANSISTOR SI NPN CHIP Q5118 2SD1819A0L TRANSISTOR SI NPN CHIP Q5118 B1ABCF000020 TRANSISTOR SI NPN CHIP Q5119 2SB1218A0L TRANSISTOR SI NPN CHIP Q5120 2SD1819A0L TRANSISTOR SI NPN CHIP Q5121 2SD1819A0L TRANSISTOR SI NPN CHIP Q5121 2SD1819A0L TRANSISTOR SI NPN CHIP Q5121 2SD1819A0L TRANSISTOR SI NPN CHIP Q5125 2SB1218A0L TRANSISTOR SI NPN CHIP Q5125 2SD1819A0L TRANSISTOR SI NPN CHIP Q5152 2SD1819A0L TRANSISTOR SI NPN CHIP Q5152 2SD1819A0L				
Q5107 B1ABCF000020 TRANSISTOR SI PNP CHIP Q5108 2SB1218A0L TRANSISTOR SI PNP CHIP Q5108 B1ADCF000063 TRANSISTOR SI PNP CHIP Q5110 2SD1819A0L TRANSISTOR SI PNP CHIP Q5110 B1ABCF000020 TRANSISTOR SI PNP CHIP Q5114 2SB1218A0L TRANSISTOR SI PNP CHIP Q5114 B1ADCF000063 TRANSISTOR SI PNP CHIP Q5118 2SD1819A0L TRANSISTOR SI PNP CHIP Q5119 2SB1218A0L TRANSISTOR SI PNP CHIP Q5119 2SB1218A0L TRANSISTOR SI PNP CHIP Q5119 B1ADCF000063 TRANSISTOR SI PNP CHIP Q5120 2SD1819A0L TRANSISTOR SI NPN CHIP Q5121 2SD1819A0L TRANSISTOR SI NPN CHIP Q5121 2SD1819A0L TRANSISTOR SI NPN CHIP Q5125 2SB1218A0L TRANSISTOR SI NPN CHIP Q5151 2SD1819A0L TRANSISTOR SI NPN CHIP Q5152 2SB1819A0L TRANSISTOR SI NPN CHIP Q5152 2SD1819A0L TRANSISTOR SI NPN CHIP Q5301 2SB1218ARS				
Q5108 2SB1218A0L TRANSISTOR SI PNP CHIP Q5108 B1ADCF000063 TRANSISTOR SI PNP CHIP Q5110 2SD1819A0L TRANSISTOR SI NPN CHIP Q5110 B1ABCF000020 TRANSISTOR SI NPN CHIP Q5114 2SB1218A0L TRANSISTOR SI PNP CHIP Q5114 B1ADCF000063 TRANSISTOR SI PNP CHIP Q5118 2SD1819A0L TRANSISTOR SI NPN CHIP Q5119 2SB1218A0L TRANSISTOR SI PNP CHIP Q5119 2SB1218A0L TRANSISTOR SI PNP CHIP Q5119 B1ADCF000063 TRANSISTOR SI PNP CHIP Q5120 2SD1819A0L TRANSISTOR SI NPN CHIP Q5121 2SD1819A0L TRANSISTOR SI NPN CHIP Q5121 2SD1819A0L TRANSISTOR SI NPN CHIP Q5125 2B1218A0L TRANSISTOR SI NPN CHIP Q5125 B1ADCF0000020 TRANSISTOR SI NPN CHIP Q5151 2SD1819A0L TRANSISTOR SI NPN CHIP Q5152 2SD1819A0L TRANSISTOR SI NPN CHIP Q5301 2SB1218ARS TRANSISTOR SI NPN CHIP Q5302 2SD1819A0L				
Q5108 B1ADCF000063 TRANSISTOR SI PNP CHIP Q5110 2SD1819A0L TRANSISTOR SI NPN CHIP Q5110 B1ABCF000020 TRANSISTOR SI NPN CHIP Q5114 B1ABCF000020 TRANSISTOR SI PNP CHIP Q5114 B1ADCF000063 TRANSISTOR SI PNP CHIP Q5118 2SD1819A0L TRANSISTOR SI NPN CHIP Q5118 B1ABCF000020 TRANSISTOR SI NPN CHIP Q5119 2SB1218A0L TRANSISTOR SI PNP CHIP Q5119 B1ADCF000063 TRANSISTOR SI NPN CHIP Q5120 2SD1819A0L TRANSISTOR SI NPN CHIP Q5121 2SD1819A0L TRANSISTOR SI NPN CHIP Q5121 2SD1819A0L TRANSISTOR SI NPN CHIP Q5125 2SB1218A0L TRANSISTOR SI NPN CHIP Q5125 2SB1218A0L TRANSISTOR SI NPN CHIP Q5151 2SD1819A0L TRANSISTOR SI NPN CHIP Q5152 2SD1819A0L TRANSISTOR SI NPN CHIP Q5152 2SD1819A0L TRANSISTOR SI NPN CHIP Q5152 2SD1819A0L TRANSISTOR SI NPN CHIP Q5302 2SD1819A				
Q5110 2SD1819A0L TRANSISTOR SI NPN CHIP Q5110 B1ABCF000020 TRANSISTOR SI NPN CHIP Q5114 2SB1218A0L TRANSISTOR SI PNP CHIP Q5114 B1ADCF000063 TRANSISTOR SI PNP CHIP Q5118 B1ADCF000063 TRANSISTOR SI NPN CHIP Q5118 B1ABCF000020 TRANSISTOR SI NPN CHIP Q5119 2SB1218A0L TRANSISTOR SI NPN CHIP Q5120 2SD1819A0L TRANSISTOR SI NPN CHIP Q5120 2SD1819A0L TRANSISTOR SI NPN CHIP Q5121 2SD1819A0L TRANSISTOR SI NPN CHIP Q5121 2SD1819A0L TRANSISTOR SI NPN CHIP Q5125 2SB1218A0L TRANSISTOR SI NPN CHIP Q5125 2SB1218A0L TRANSISTOR SI NPN CHIP Q5151 2SD1819A0L TRANSISTOR SI NPN CHIP Q5152 2SD1819A0L TRANSISTOR SI NPN CHIP Q5152 2SD1819A0L TRANSISTOR SI NPN CHIP Q5152 2SD1819A0L TRANSISTOR SI NPN CHIP Q5302 2SD1819A0L TRANSISTOR SI NPN CHIP Q5303 2SD1819A0L </td <td></td> <td></td> <td></td> <td></td>				
Q5110 B1ABCF000020 TRANSISTOR SI NPN CHIP Q5114 2SB1218A0L TRANSISTOR SI PNP CHIP Q5114 B1ADCF000063 TRANSISTOR SI PNP CHIP Q5118 B1ADCF000063 TRANSISTOR SI NPN CHIP Q5118 B1ABCF000020 TRANSISTOR SI NPN CHIP Q5119 2SB1218A0L TRANSISTOR SI NPN CHIP Q5120 2SD1819A0L TRANSISTOR SI NPN CHIP Q5120 2SD1819A0L TRANSISTOR SI NPN CHIP Q5121 2SD1819A0L TRANSISTOR SI NPN CHIP Q5121 2SD1819A0L TRANSISTOR SI NPN CHIP Q5125 2SB1218A0L TRANSISTOR SI NPN CHIP Q5125 2SB1218A0L TRANSISTOR SI NPN CHIP Q5151 2SD1819A0L TRANSISTOR SI NPN CHIP Q5152 2SB1218A0L TRANSISTOR SI NPN CHIP Q5151 2SD1819A0L TRANSISTOR SI NPN CHIP Q5152 2SD1819A0L TRANSISTOR SI NPN CHIP Q5301 2SB1218ARS TRANSISTOR SI NPN CHIP Q5302 2SD1819A0L TRANSISTOR SI NPN CHIP Q5303 2SD1819A0L </td <td></td> <td></td> <td></td> <td></td>				
Q5114 2SB1218A0L TRANSISTOR SI PNP CHIP Q5114 B1ADCF000063 TRANSISTOR SI PNP CHIP Q5118 2SD1819A0L TRANSISTOR SI NPN CHIP Q5118 B1ABCF000020 TRANSISTOR SI NPN CHIP Q5119 2SB1218A0L TRANSISTOR SI NPN CHIP Q5120 2SD1819A0L TRANSISTOR SI NPN CHIP Q5120 B1ABCF000020 TRANSISTOR SI NPN CHIP Q5121 2SD1819A0L TRANSISTOR SI NPN CHIP Q5121 2SD1819A0L TRANSISTOR SI NPN CHIP Q5125 2SB1218A0L TRANSISTOR SI NPN CHIP Q5125 2SB149A0L TRANSISTOR SI NPN CHIP Q5151 2SD1819A0L TRANSISTOR SI NPN CHIP Q5152 2SD1819A0L TRANSISTOR SI NPN CHIP Q5152 2SD1819A0L TRANSISTOR SI NPN CHIP Q5152 2SD1819A0L TRANSISTOR SI NPN CHIP Q5152 2SD1819A0L TRANSISTOR SI NPN CHIP Q5301 2SB1218ARS TRANSISTOR SI NPN CHIP Q5302 2SD1819A0L TRANSISTOR SI NPN CHIP Q5303 2SD1819A0L				
Q5114 B1ADCF000063 TRANSISTOR SI PNP CHIP Q5118 2SD1819A0L TRANSISTOR SI NPN CHIP Q5118 B1ABCF000020 TRANSISTOR SI NPN CHIP Q5119 2SB1218A0L TRANSISTOR SI PNP CHIP Q5119 B1ADCF000063 TRANSISTOR SI NPN CHIP Q5120 2SD1819A0L TRANSISTOR SI NPN CHIP Q5121 2SD1819A0L TRANSISTOR SI NPN CHIP Q5121 B1ABCF000020 TRANSISTOR SI NPN CHIP Q5125 2SB1218A0L TRANSISTOR SI NPN CHIP Q5125 B1ADCF000063 TRANSISTOR SI NPN CHIP Q5151 2SD1819A0L TRANSISTOR SI NPN CHIP Q5152 B1ABCF000020 TRANSISTOR SI NPN CHIP Q5152 2SD1819A0L TRANSISTOR SI NPN CHIP Q5152 2SD1819A0L TRANSISTOR SI NPN CHIP Q5152 B1ABCF000020 TRANSISTOR SI NPN CHIP Q5301 2SB1218ARS TRANSISTOR SI NPN CHIP Q5302 2SD1819A0L TRANSISTOR SI NPN CHIP Q5303 2SD1819A0L TRANSISTOR SI NPN CHIP Q5353 B1ABCF				
Q5118 2SD1819A0L TRANSISTOR SI NPN CHIP Q5118 B1ABCF000020 TRANSISTOR SI NPN CHIP Q5119 2SB1218A0L TRANSISTOR SI PNP CHIP Q5119 B1ADCF000063 TRANSISTOR SI NPN CHIP Q5120 2SD1819A0L TRANSISTOR SI NPN CHIP Q5120 B1ABCF000020 TRANSISTOR SI NPN CHIP Q5121 2SD1819A0L TRANSISTOR SI NPN CHIP Q5121 B1ABCF000020 TRANSISTOR SI NPN CHIP Q5125 2SB1218A0L TRANSISTOR SI PNP CHIP Q5152 2SB1218A0L TRANSISTOR SI NPN CHIP Q5151 2SD1819A0L TRANSISTOR SI NPN CHIP Q5151 2SD1819A0L TRANSISTOR SI NPN CHIP Q5152 2SD1819A0L TRANSISTOR SI NPN CHIP Q5152 2SD1819A0L TRANSISTOR SI NPN CHIP Q5301 2SB1218ARS TRANSISTOR SI NPN CHIP Q5302 2SD1819A0L TRANSISTOR SI NPN CHIP Q5303 2SD1819A0L TRANSISTOR SI NPN CHIP Q5353 2SD1819A0L TRANSISTOR SI NPN CHIP Q5354 2SD1819A0L </td <td></td> <td></td> <td></td> <td></td>				
Q5118 B1ABCF000020 TRANSISTOR SI NPN CHIP Q5119 2SB1218A0L TRANSISTOR SI PNP CHIP Q5119 B1ADCF000063 TRANSISTOR SI PNP CHIP Q5120 2SD1819A0L TRANSISTOR SI NPN CHIP Q5121 B1ABCF000020 TRANSISTOR SI NPN CHIP Q5121 2SD1819A0L TRANSISTOR SI NPN CHIP Q5121 B1ABCF000020 TRANSISTOR SI NPN CHIP Q5125 2SB1218A0L TRANSISTOR SI PNP CHIP Q5125 B1ADCF000063 TRANSISTOR SI NPN CHIP Q5151 2SD1819A0L TRANSISTOR SI NPN CHIP Q5152 2SD1819A0L TRANSISTOR SI NPN CHIP Q5151 2SD1819A0L TRANSISTOR SI NPN CHIP Q5152 2SD1819A0L TRANSISTOR SI NPN CHIP Q5301 2SB1218ARS TRANSISTOR SI NPN CHIP Q5302 2SD1819A0L TRANSISTOR SI NPN CHIP Q5303 2SD1819A0L TRANSISTOR SI NPN CHIP Q5353 2SD1819A0L TRANSISTOR SI NPN CHIP Q5354 2SD1819A0L TRANSISTOR SI NPN CHIP Q5355 DTC114EK-T				
Q5119 2SB1218A0L TRANSISTOR SI PNP CHIP Q5119 B1ADCF000063 TRANSISTOR SI PNP CHIP Q5120 2SD1819A0L TRANSISTOR SI NPN CHIP Q5120 B1ABCF000020 TRANSISTOR SI NPN CHIP Q5121 2SD1819A0L TRANSISTOR SI NPN CHIP Q5121 B1ABCF000020 TRANSISTOR SI NPN CHIP Q5125 2SB1218A0L TRANSISTOR SI PNP CHIP Q5152 2SB1218A0L TRANSISTOR SI NPN CHIP Q5151 2SD1819A0L TRANSISTOR SI NPN CHIP Q5152 2SD1819A0L TRANSISTOR SI NPN CHIP Q5152 2SD1819A0L TRANSISTOR SI NPN CHIP Q5152 2SD1819A0L TRANSISTOR SI NPN CHIP Q5301 2SB1218ARS TRANSISTOR SI NPN CHIP Q5302 2SD1819A0L TRANSISTOR SI NPN CHIP Q5303 2SD1819A0L TRANSISTOR SI NPN CHIP Q5303 2SD1819A0L TRANSISTOR SI NPN CHIP Q5353 2SD1819A0L TRANSISTOR SI NPN CHIP Q5354 2SD1819A0L TRANSISTOR SI NPN CHIP Q5355 DTC114EK-TX <td></td> <td></td> <td></td> <td></td>				
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Q5612 B1ABCF000020 TRANSISTOR SI NPN CHIP				
Q5613 B1ABCF000020 TRANSISTOR SI NPN CHIP				
Q5901 2SD225900A TRANSISTOR SI NPN				
Q5901				

Ref. No.	Part No.	Part Name & Description	Remarks
Q6003	2SD0601A0L	TRANSISTOR SI NPN CHIP	
Q6003	B1ABCF000011	TRANSISTOR SI NPN CHIP	
Q6004	2SB1218A0L	TRANSISTOR SI PNP CHIP	
Q6004	B1ADCF000063	TRANSISTOR SI PNP CHIP	
Q6005	2SB0709A0L	TRANSISTOR SI PNP CHIP	
Q6005	B1ADCF000001	TRANSISTOR SI PNP CHIP	
Q6006	2SD1819A0L	TRANSISTOR SI NPN CHIP	
Q6006	B1ABCF000020	TRANSISTOR SI NPN CHIP	

DIODES

Ref. No.	Part No.	Part Name & Description	Remarks
D1501	DB105G	DIODE SI	Δ
D1501	B0EBKR000003	DIODE SI	Δ
D1501	B0EBKR000006	DIODE SI	Δ
D1501	B0EBKR000020	DIODE SI	Δ
D1502	B0JAMD000012	DIODE SI	
D1502	B0JAGE000001	DIODE SI	
D1502	1GWJ43TPA3	DIODE SI	
D1503	B0HAJL000001	DIODE SI	
D1503	B0HAGP000012	DIODE SI	
D1504	B0HAJL000001	DIODE SI	
D1504	B0HAGP000012	DIODE SI	
D1505	B0HAJL000001	DIODE SI	
D1505	B0HAGP000012	DIODE SI	
D1506	B0HAJL000001	DIODE SI	
D1506	B0HAGP000012	DIODE SI	
D1507	B0HAHP000014	DIODE SI	
D1507	B0HAJP000007	DIODE SI	
D1507	B0HAMP000061	DIODE SI	
D1508	ERC81-006L7	DIODE SI	
D1508	B0JAPG000021	DIODE SI	
D1508	RK46LF015302	DIODE SI	
D1509	B0JAMD000012	DIODE SI	
D1509	B0JAGE000001	DIODE SI	
D1509	1GWJ43TPA3	DIODE SI	
D1510	B0HAHP000014	DIODE SI	
D1510	B0HAJP000007	DIODE SI	
D1510	B0HAMP000061	DIODE SI	
D1511	ERB32-01L3	DIODE SI	
D1511	B0HAML000013	DIODE SI	
D1511	B0HAML000014	DIODE SI	
D1511	RGP15GL-5008	DIODE SI	
D1512	ERB84-009V1	DIODE SI	
D1512	EK19V1	DIODE SI	
D1513	MA4091N-H	DIODE ZENER 9.1V	
D1514	MA4110N-H	DIODE ZENER 11V	
D1515	MA2180LA	DIODE ZENER 18V	Δ
D1515	1N4746A-T	DIODE ZENER 18V	Δ
D1515	1N4746ARL	DIODE ZENER 18V	Δ
D4592	MA2C165001VT	DIODE SI	
D4592	B0AACK000004	DIODE SI	

Ref. No.	Part No.	Part Name & Description	Remarks
D4592	1SS119	DIODE SI	
D4593	MA2C165001VT	DIODE SI	
D4593	B0AACK000004	DIODE SI	
D4593	1SS119	DIODE SI	
D4701	MA2C165001VT	DIODE SI	
D4702	MA2C165001VT	DIODE SI	
D5005	MA2C165001VT	DIODE SI (B,C)	
D5005	B0AACK000004	DIODE SI (B,C)	
D5005	1SS119	DIODE SI (B,C)	
D5304	MA2C165001VT	DIODE SI	
D5304	B0AACK000004	DIODE SI	
D5304	1SS119	DIODE SI	
D5305	MAZ40910MF	DIODE ZENER 9.1V	
D5305	B0BA8R700009	DIODE SI	
D5305	RD9.1ESAB2	DIODE ZENER 9.1V	
D5307	MA2C165001VT	DIODE SI	
D5308	MA2C165001VT	DIODE SI	
D5353	MA2C165001VT	DIODE SI	
D5353	B0AACK000004	DIODE SI	
D5353	1SS119	DIODE SI	
D5354	MA2C165001VT	DIODE SI	
D5354	B0AACK000004	DIODE SI	
D5354	1SS119	DIODE SI	
D5501	MA4062-L	DIODE ZENER 6.2V	Δ
D5506	MA4047-M	DIODE ZENER 4.7V (B,C)	
D5507	MA2C165001VT	DIODE SI (B,C)	
D5507	B0AACK000004	DIODE SI (B,C)	
D5507	1SS119	DIODE SI (B,C)	
D5508	MA2C165001VT	DIODE SI (B,C)	
D5508	B0AACK000004	DIODE SI (B,C)	
D5508	1SS119	DIODE SI (B,C)	
D5509	MA2C165001VT	DIODE SI (B,C)	
D5509	B0AACK000004	DIODE SI (B,C)	
D5509	1SS119	DIODE SI (B,C)	
D5611	MA2C165001VT	DIODE SI	
D5611	B0AACK000004	DIODE SI	
D5611	1SS119	DIODE SI	
D5612	MA2C165001VT	DIODE SI	
D5612	B0AACK000004	DIODE SI	
D5612	1SS119	DIODE SI	
D6003	MA2C165001VT	DIODE SI	
D6003	B0AACK000004	DIODE SI	
D6003	1SS119	DIODE SI	
D6005	MA2C165001VT	DIODE SI	
D6005	B0AACK000004	DIODE SI	
D6005	1SS119	DIODE SI	
D6301	B3ABA0000400	LIGHT EMITTING DIODE GREEN	
D6302	B3ACA0000192	LIGHT EMITTING DIODE ORANGE	
D6303	B3AAA0000538	LIGHT EMITTING DIODE RED	

RESISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
R1501	D0AF473JA038	CARBON 1/2W 47K	
R1502	ERD2FCG681V	FUSE 1/4W 680	Δ
R1503	ERX2SJR22P	METAL FILM 2W 0.22	
R1505	ERJ6GEYJ332V	MGF CHIP 1/10W 3.3K	
R1507	ERJ6GEYJ182V	MGF CHIP 1/10W 1.8K	
R1508	ERG2SJ104P	METAL OXIDE 2W 100K	
R1510	ERDS2TJ750	CARBON 1/4W 75	
R1511	ERJ6GEYJ222V	MGF CHIP 1/10W 2.2K	
R1512	ERD25FJ100P	CARBON 1/4W 10	<u> </u>
R1513	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R1514	ERJ6GEYJ221V	MGF CHIP 1/10W 220	
R1515	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R1516	ERJ6GEYJ822V	MGF CHIP 1/10W 8.2K	
R1517	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R1518	D1BD2431A016	MGF CHIP 1/10W 2.43K	
R1519	D0HD222ZA002	MGF CHIP 1/10W 2.2K	
R1520	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R1521	ERJ6GEYJ472V	MGF CHIP 1/10W 4.7K	
R1522	ERJ6GEY0R00V	MGF CHIP 1/10W 0	
R1525	ERDS2TJ153	CARBON 1/4W 15K	
R1526	ERDS2TJ153	CARBON 1/4W 15K	
R1527	ERDS2TJ153	CARBON 1/4W 15K	
R1528	ERDS2TJ153	CARBON 1/4W 15K	
R1529	ERJ6GEYJ122V	MGF CHIP 1/10W 1.2K	
R1530	ERJ6GEYJ122V	MGF CHIP 1/10W 1.2K	
R1531	ERJ6GEYJ104V	MGF CHIP 1/10W 100K	
R1532	ERJ6GEYJ473V	MGF CHIP 1/10W 47K	
R1535	ERJ6GEYJ473V	MGF CHIP 1/10W 47K	
R1536	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R1537	ERDS2TJ103	CARBON 1/4W 10K	
R1538	ERG2SJ240E	METAL OXIDE 2W 24	
R1539	ERG2SJ240E	METAL OXIDE 2W 24	
R1540	ERG2SJ240E	METAL OXIDE 2W 24	
R1541	ERG2SJ240E	METAL OXIDE 2W 24	
R1542	ERG2SJ240E	METAL OXIDE 2W 24	
R4171	ERJ6GEYJ153V	MGF CHIP 1/10W 15K	
R4172	ERJ6GEYJ153V	MGF CHIP 1/10W 15K	
R4591	ERDS2TJ681	CARBON 1/4W 680	
R4592	ERDS2TJ681	CARBON 1/4W 680	
R4593	ERDS2TJ681	CARBON 1/4W 680	
R4594	ERDS2TJ681	CARBON 1/4W 680	
R4701	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R4702	ERJ6GEYJ473V	MGF CHIP 1/10W 47K	
R4703	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R4704	ERJ6GEYJ473V	MGF CHIP 1/10W 47K	
R4705	ERJ6GEYJ472V	MGF CHIP 1/10W 4.7K	
R4706	ERJ6GEYJ562V	MGF CHIP 1/10W 5.6K	
R4707		MGF CHIP 1/10W 4.7K	
R5023	ERJ6GEYJ221V	MGF CHIP 1/10W 220	
R5035		MGF CHIP 1/10W 100 (B,C)	
R5036		MGF CHIP 1/10W 560 (B,C)	
R5037		MGF CHIP 1/10W 270 (B,C)	
R5038		MGF CHIP 1/10W 1K (B,C)	

Ref. No.	Part No.	Part Name & Description	Remarks
R5039	ERJ6GEYJ153V	MGF CHIP 1/10W 15K (B,C)	
R5040	ERJ6GEYJ103V	MGF CHIP 1/10W 10K (B,C)	
R5041	ERJ6GEYJ331V	MGF CHIP 1/10W 330 (B,C)	
R5042	ERJ6GEYJ561V	MGF CHIP 1/10W 560 (B,C)	
R5043	ERJ6GEYJ331V	MGF CHIP 1/10W 330 (B,C)	
R5044	ERJ6GEYJ272V	MGF CHIP 1/10W 2.7K (B,C)	
R5045	ERJ6GEYJ103V	MGF CHIP 1/10W 10K (B,C)	
R5102	ERJ6GEYJ470V	MGF CHIP 1/10W 47	
R5102	ERJ6GEYJ221V	MGF CHIP 1/10W 220	
		MGF CHIP 1/10W 220	
R5104	ERJ6GEYJ102V		
R5105	ERJ6GEY0R00V	MGF CHIP 1/10W 0	
R5106	ERJ6GEYJ153V	MGF CHIP 1/10W 15K	
R5107	ERJ6GEYJ153V	MGF CHIP 1/10W 15K	
R5108	ERJ6GEYJ471V	MGF CHIP 1/10W 470	
R5112	ERJ6GEYJ472V	MGF CHIP 1/10W 4.7K	
R5113	ERJ6GEYJ471V	MGF CHIP 1/10W 470	
R5117	ERJ6GEY0R00V	MGF CHIP 1/10W 0	
R5118	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R5121	ERJ6GEYJ301V	MGF CHIP 1/10W 300	
R5122	ERJ6GEYJ471V	MGF CHIP 1/10W 470	
R5124	ERJ6GEYJ331V	MGF CHIP 1/10W 330	
R5127	ERJ6GEYJ333V	MGF CHIP 1/10W 33K	
R5128	ERJ6GEYJ333V	MGF CHIP 1/10W 33K	
R5129	ERJ6GEY0R00V	MGF CHIP 1/10W 0	
R5130	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R5132	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R5133	ERJ6GEYJ471V	MGF CHIP 1/10W 470	
R5134	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R5135	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R5136	ERJ6GEYJ471V	MGF CHIP 1/10W 470	
R5138	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R5142	ERJ6GEYJ471V	MGF CHIP 1/10W 470	
R5143	ERJ6GEYJ391V	MGF CHIP 1/10W 390	
R5144	ERJ6GEYJ561V	MGF CHIP 1/10W 560	
		MGF CHIP1/10W 220	
R5145	ERJ6ENF2200V		
R5146	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R5147	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R5148	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	-
R5150	ERJ6GEYJ471V	MGF CHIP 1/10W 470	
R5152	ERJ6GEYJ680V	MGF CHIP 1/10W 68	-
R5153	ERJ6ENF2201V	MGF CHIP1/10W 2.2K	
R5154	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R5158	ERJ6GEYJ471V	MGF CHIP 1/10W 470	
R5159	ERJ6GEYJ222V	MGF CHIP 1/10W 2.2K	
R5160	ERJ6GEYJ471V	MGF CHIP 1/10W 470	
R5161	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R5162	ERJ6GEYJ101V	MGF CHIP 1/10W 100	
R5164	ERJ6GEYJ273V	MGF CHIP 1/10W 27K	
R5165	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R5166	ERJ6GEYJ101V	MGF CHIP 1/10W 100	
R5167	ERJ6GEYJ181V	MGF CHIP 1/10W 180	
R5169	ERJ6GEYJ124V	MGF CHIP 1/10W 120K	
R5170	ERJ6GEYJ272V	MGF CHIP 1/10W 2.7K	
R5171	ERJ6GEYJ123V	MGF CHIP 1/10W 12K	
			1

Ref. No.	Part No.	Part Name & Description	Remarks
R5172	ERJ6GEYJ101V	MGF CHIP 1/10W 100	
R5174	ERJ6GEY0R00V	MGF CHIP 1/10W 0	
R5178	ERJ6GEYJ101V	MGF CHIP 1/10W 100	
R5179	ERJ6GEYJ101V	MGF CHIP 1/10W 100	
R5180	ERJ6GEYJ333V	MGF CHIP 1/10W 33K	
R5181	ERJ6GEYJ123V	MGF CHIP 1/10W 12K	
R5182	ERJ6GEYJ332V	MGF CHIP 1/10W 3.3K	
R5183	ERJ6GEYJ122V	MGF CHIP 1/10W 1.2K	
R5184	ERJ6GEYJ101V	MGF CHIP 1/10W 100	
R5185	ERJ6GEYJ332V	MGF CHIP 1/10W 3.3K	
R5193	ERJ6GEY0R00V	MGF CHIP 1/10W 0	
R5194	ERJ6GEYJ391V	MGF CHIP 1/10W 390	
R5195	ERJ6GEYJ471V	MGF CHIP 1/10W 470	
R5196	ERJ6GEYJ331V	MGF CHIP 1/10W 330	
R5197	ERJ6GEYJ101V	MGF CHIP 1/10W 100	
R5198	ERJ6GEYJ101V	MGF CHIP 1/10W 100	
R5301	ERJ6GEYJ222V	MGF CHIP 1/10W 2.2K	
R5302	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R5303	ERJ6GEYJ472V	MGF CHIP 1/10W 4.7K	
R5304	ERJ6GEYJ393V	MGF CHIP 1/10W 39K	
R5305	ERJ6GEYJ224V	MGF CHIP 1/10W 220K	
R5306	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R5307	ERJ6GEY0R00V	MGF CHIP 1/10W 0	
R5308	ERJ6GEYJ393V	MGF CHIP 1/10W 39K	
R5309	ERJ6GEYJ184V	MGF CHIP 1/10W 180K	
R5310	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R5311	ERJ6GEYJ331V	MGF CHIP 1/10W 330	
R5312	ERJ6GEYJ331V	MGF CHIP 1/10W 330	
R5313	ERJ6GEYJ331V	MGF CHIP 1/10W 330	
R5314	ERJ6GEYJ222V	MGF CHIP 1/10W 2.2K	
R5315	ERJ6GEYJ222V	MGF CHIP 1/10W 2.2K	
R5316	ERJ6GEYJ222V	MGF CHIP 1/10W 2.2K	
R5317	ERJ6GEYJ101V	MGF CHIP 1/10W 100	
R5318	ERJ6GEY0R00V	MGF CHIP 1/10W 0	
R5320	ERJ6GEY0R00V	MGF CHIP 1/10W 0	
R5321	ERJ6GEYJ750V	MGF CHIP 1/10W 75	
R5322	ERJ6GEYJ750V	MGF CHIP 1/10W 75	
R5323	ERJ6GEYJ101V	MGF CHIP 1/10W 100	
R5324	ERJ6GEYJ101V	MGF CHIP 1/10W 100	
R5351	ERJ6GEYJ101V	MGF CHIP 1/10W 100	
R5352	ERJ6GEYJ101V	MGF CHIP 1/10W 100	
R5353		MGF CHIP 1/10W 100	
R5359	ERJ6GEYJ101V	MGF CHIP 1/10W 100	
R5361	ERJ6GEYJ152V	MGF CHIP 1/10W 1.5K	
R5362	ERJ6GEYJ222V	MGF CHIP 1/10W 2.2K	
R5363	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R5381	ERJ6GEYJ563V	MGF CHIP 1/10W 56K	
R5382	ERJ6GEYJ682V	MGF CHIP 1/10W 6.8K	
R5383	ERJ6GEYJ562V	MGF CHIP 1/10W 5.6K	
R5401	ERJ6GEYJ561V	MGF CHIP 1/10W 560	
R5402	ERJ6GEYJ394V	MGF CHIP 1/10W 390K	
R5403	ERJ6GEYJ221V	MGF CHIP 1/10W 220	
R5405	ERJ6GEYJ822V	MGF CHIP 1/10W 8.2K	
R5406	ERJ6GEYJ101V	MGF CHIP 1/10W 100	

Ref. No.	Part No.	Part Name & Description	Remarks
R5501	ERJ6GEYJ471V	MGF CHIP 1/10W 470	
R5502	ERJ6GEYJ394V	MGF CHIP 1/10W 390K	
R5503	ERDS2TJ471	CARBON 1/4W 470	
R5504	ERJ6GEYJ101V	MGF CHIP 1/10W 100	
R5505	ERJ6ENF3241V	MGF CHIP 1/10W 3.24K	Δ
R5506	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R5507	ERJ6GEYJ153V	MGF CHIP 1/10W 15K (B,C)	
R5508	ERJ6GEYJ561V	MGF CHIP 1/10W 560	
R5509	ERJ6GEYJ101V	MGF CHIP 1/10W 100 (A)	
R5510	ERJ6GEYJ101V	MGF CHIP 1/10W 100	
R5511	ERJ6GEYJ222V	MGF CHIP 1/10W 2.2K	
R5512	ERJ6GEYJ151V	MGF CHIP 1/10W 150	
R5513	ERJ6GEYJ101V	MGF CHIP 1/10W 100	
R5515	ERJ6GEYJ272V	MGF CHIP 1/10W 2.7K	
R5516	ERJ6GEYJ472V	MGF CHIP 1/10W 4.7K (B,C)	
R5517	ERJ6GEYJ472V	MGF CHIP 1/10W 4.7K (B,C)	
R5518	ERJ6GEYJ222V	MGF CHIP 1/10W 2.2K (B,C)	
R5604	ERJ6GEYJ332V	MGF CHIP 1/10W 3.3K	
R5611	ERJ6GEYJ101V	MGF CHIP 1/10W 100	
R5612	ERJ6GEYJ101V	MGF CHIP 1/10W 100	
R5613	ERJ6GEYJ101V	MGF CHIP 1/10W 100	
R5614	ERJ6GEYJ563V	MGF CHIP 1/10W 56K	
R5615	ERJ6GEYJ273V	MGF CHIP 1/10W 27K	
R5616	ERJ6GEYJ471V	MGF CHIP 1/10W 470	
R5617	ERJ6GEYJ183V	MGF CHIP 1/10W 18K	
R5618	ERJ6GEYJ563V	MGF CHIP 1/10W 56K	
R5619	ERJ6GEYJ101V	MGF CHIP 1/10W 100	
R5902	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R5904	ERJ6GEY0R00V	MGF CHIP 1/10W 0	
R5932	ERJ6GEYJ101V	MGF CHIP 1/10W 100	
R5933	ERJ6GEYJ101V	MGF CHIP 1/10W 100	
R6001	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R6002	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R6003	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R6004	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R6005			
R6006		MGF CHIP 1/10W 10K MGF CHIP 1/10W 2.2K	
R6007			
R6008		MGF CHIP 1/10W 220 MGF CHIP 1/10W 1K	
R6009		MGF CHIP 1/10W 1K	
		MGF CHIP 1/10W 1K	
R6010			
R6011		MGF CHIP 1/10W 560	
R6012		MGF CHIP 1/10W 560	
R6013		MGF CHIP 1/10W 1K	
R6014		MGF CHIP 1/10W 1K	
R6015		MGF CHIP 1/10W 100	
R6016		MGF CHIP 1/10W 100	
R6017		MGF CHIP 1/10W 100	
R6018		MGF CHIP 1/10W 100	
R6019		MGF CHIP 1/10W 15K	
R6020		MGF CHIP 1/10W 1K	
R6021	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R6024	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R6028	ERJ6GEYJ472V	MGF CHIP 1/10W 4.7K	

Ref. No.	Part No.	Part Name & Description	Remarks
R6029	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R6030	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R6031	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R6032	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R6035	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R6040	ERJ6GEYJ101V	MGF CHIP 1/10W 100	
R6041	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R6042	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R6043	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R6044	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R6045	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R6046	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R6047	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R6049	ERJ6GEY0R00V	MGF CHIP 1/10W 0	
R6050	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R6053	ERJ6GEYJ222V	MGF CHIP 1/10W 2.2K	
R6054	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R6055	ERJ6GEYJ101V	MGF CHIP 1/10W 100	
R6056	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R6057	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R6058	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R6059	ERJ6GEYJ222V	MGF CHIP 1/10W 2.2K	
R6060	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R6061	ERJ6GEYJ101V	MGF CHIP 1/10W 100	
R6062	ERJ6GEYJ101V	MGF CHIP 1/10W 100	
R6063	ERJ6GEYJ101V	MGF CHIP 1/10W 100	
R6064	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R6066	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R6067	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R6077	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R6078	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R6080	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R6081	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R6082	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R6090	ERJ6GEYJ471V	MGF CHIP 1/10W 470	
R6091	ERJ6GEYJ471V	MGF CHIP 1/10W 470	
R6092	ERJ6GEYJ471V	MGF CHIP 1/10W 470	
R6093	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R6094	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R6095	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R6096	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R6097	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R6098	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R6100	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R6126	ERJ6GEYJ221V	MGF CHIP 1/10W 220	
R6127	ERJ6GEYJ221V	MGF CHIP 1/10W 220	
R6130	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R6131	ERJ6GEYJ183V	MGF CHIP 1/10W 18K	
R6132	ERJ6GEYJ391V	MGF CHIP 1/10W 390	
R6133	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R6134		MGF CHIP 1/10W 10K	
R6135		MGF CHIP 1/10W 4.7M	
R6136		MGF CHIP 1/10W 3.3K	
R6137	ERJ6GEYJ182V	MGF CHIP 1/10W 1.8K	

Ref. No.	Part No.	Part Name & Description	Remarks
R6138	ERDS2TJ560T	CARBON 1/4W 56	
R6143	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R6144	ERJ6GEYJ222V	MGF CHIP 1/10W 2.2K	
R6146	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R6149	ERJ6GEYJ273V	MGF CHIP 1/10W 27K	
R6150	ERJ6GEYJ273V	MGF CHIP 1/10W 27K	
R6160	ERJ6GEYJ562V	MGF CHIP 1/10W 5.6K	
R6161	ERJ6GEYJ562V	MGF CHIP 1/10W 5.6K	
R6162	ERJ6GEYJ562V	MGF CHIP 1/10W 5.6K	
R6163	ERJ6GEYJ562V	MGF CHIP 1/10W 5.6K	
R6164	ERJ6GEYJ472V	MGF CHIP 1/10W 4.7K	
R6165	ERJ6GEYJ472V	MGF CHIP 1/10W 4.7K	
R6166	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R6167	ERJ6GEYJ562V	MGF CHIP 1/10W 5.6K	
R6171	ERJ6GEYJ562V	MGF CHIP 1/10W 5.6K	
R6205	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R6207	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R6208	ERJ6GEYJ152V	MGF CHIP 1/10W 1.5K	
R6301	ERJ6GEYJ182V	MGF CHIP 1/10W 1.8K	
R6302	ERJ6GEYJ182V	MGF CHIP 1/10W 1.8K	
R6303	ERJ6GEYJ183V	MGF CHIP 1/10W 18K	
R6304	ERJ6GEYJ182V	MGF CHIP 1/10W 1.8K	
R6305	ERJ6GEYJ392V	MGF CHIP 1/10W 3.9K	
R6306	ERJ6GEYJ123V	MGF CHIP 1/10W 12K	
R6307	ERJ6GEYJ182V	MGF CHIP 1/10W 1.8K	
R6308	ERJ6GEYJ392V	MGF CHIP 1/10W 3.9K	
R6316	ERJ6GEY0R00V	MGF CHIP 1/10W 0	

CAPACITORS

Ref. No.	Part No.	Part Name & Description	Remarks
C1501	F1B2E101A009	CERAMIC 250V 100PF	Δ
C1501	F1B2E101A008	CERAMIC 250V 100PF	Δ
C1501	F1B2E101A032	CERAMIC 250V 100PF	Δ
C1501	F1B2E101A037	CERAMIC 250V 100PF	Δ
C1502	ECKATS103MF	CERAMIC 250V 0.01UF	Δ
C1502	ECKETS103MF	CERAMIC 125V 0.01UF	Δ
C1502	VCKST3G103MY	CERAMIC 250V 0.01UF	Δ
C1502	VCKSU3D103MY	CERAMIC 125V 0.01UF	Δ
C1503	ECKATS332ME8	CERAMIC 250V 3300PF	Δ
C1503	ECKDNB332ME8	CERAMIC 125V 3300PF	Δ
C1503	ECKETS332ME8	CERAMIC 125V 3300PF	Δ
C1503	VCKST3G332MX	CERAMIC 250V 3300PF	Δ
C1503	VCKSU3D332MX	CERAMIC 125V 3300PF	Δ
C1504	F1B2E152A012	CERAMIC 250V 1500PF	Δ
C1504	F1B2E152A011	CERAMIC 250V 1500PF	Δ
C1504	F1B2E152A044	CERAMIC 250V 1500PF	Δ
C1504	F1B2E152A045	CERAMIC 250V 1500PF	Δ

Ref. No.	Part No.	Part Name & Description	Remark
C1504	F1B2E1520002	CERAMIC 250V 1500PF	$ \Delta$
C1504	F1B2E1520006	CERAMIC 250V 1500PF	Δ
C1505	ECA1HHG470B	ELECTROLYTIC 50V 47UF	
C1506	ECJ2VC1H471J	C CHIP 50V 470PF	
C1507	ECEA2DU121YE	ELECTROLYTIC 200V 120UF	Δ
C1507	F2A2D1210001	ELECTROLYTIC 200V 120UF	Δ
C1507	F2A2D1210003	ELECTROLYTIC 200V 120UF	Δ
C1507	VCESR2D121XE	ELECTROLYTIC 200V 120UF	Δ
C1508	F1B3D471A011	CERAMIC 2KV 470PF	
C1509	ECKR2H221KB5	CERAMIC 500V 220PF	
C1510	ECJ2VB1E104K	C CHIP 25V 0.1UF	
C1511	ECA2DHG4R7B	ELECTROLYTIC 200V 4.7UF	
C1512	ECJ2VB1H821K	C CHIP 50V 820PF	
C1513	ECJ2VC1H101J	C CHIP 50V 100PF	
C1514	ECJ2VB1H102K	C CHIP 50V 1000PF	
C1515	F2A0J2220018	ELECTROLYTIC 6.3V 2200UF	
C1516	ECEA1PEE331	ELECTROLYTIC 18V 330UF	
C1517	ECEA1PEE331	ELECTROLYTIC 18V 330UF	
C1517	ECA1HHG470B	ELECTROLYTIC 50V 47UF	
C1516	ECEA1PEE331	ELECTROLYTIC 30V 470F	
C1520		CERAMIC 16V 0.22UF	
C1521	ECEA1PEE331	ELECTROLYTIC 18V 330UF	
C1522	ECA1CM331B	ELECTROLYTIC 16V 330UF	
C1523	ECEA1CKA470	ELECTROLYTIC 16V 47UF	
C1524	ECA0JFE102XE	ELECTROLYTIC 6.3V 1000UF	
C1525	ECJ2YB1C334K	C CHIP 16V 0.33UF	
C1526	ECA1HM100B	ELECTROLYTIC 50V 10UF	
C1527	ECEA0JEE101	ELECTROLYTIC 6.3V 100UF	
C1528	ECEA1CKA100	ELECTROLYTIC 16V 10UF	
C1529	ECEA1CKA100	ELECTROLYTIC 16V 10UF	
C1532	ECA0JM101I	ELECTROLYTIC 6.3V 100UF	
C1533	ECEA0JFE102X	ELECTROLYTIC 6.3V 1000UF	
C1534	ECEA0JFE102X	ELECTROLYTIC 6.3V 1000UF	
C1537	ECJ2VB1E104K		
C1538	ECEA1HKAR47	ELECTROLYTIC 50V 0.47UF	
C1539	ECEA1HKAR47	ELECTROLYTIC 50V 0.47UF	
C1540	ECEA1CKA100	ELECTROLYTIC 16V 10UF	
C1541	ECEA1CKA100	ELECTROLYTIC 16V 10UF	
C1545	ECA0JM102B	ELECTROLYTIC 6.3V 1000UF	
C4171	ECEA1HKA010	ELECTROLYTIC 50V 1UF	
C4701	ECEA1CKA100	ELECTROLYTIC 16V 10UF	
C4702	ECEA1CKA100	ELECTROLYTIC 16V 10UF	
C4703	ECJ2VF1H103Z	C CHIP 50V 0.01UF	
C4704	ECEA1CKA100	ELECTROLYTIC 16V 10UF	
C4707	ECJ2VF1H103Z	C CHIP 50V 0.01UF	
C4708	ECEA1CKA100	ELECTROLYTIC 16V 10UF	
C4709	ECJ2VC1H101J	C CHIP 50V 100PF	
C4710	ECJ2VC1H101J	C CHIP 50V 100PF	
C5016	ECJ2VF1H103Z	C CHIP 50V 0.01UF (B,C)	
C5017	ECJ2VF1E104Z	C CHIP 25V 0.1UF (B,C)	
C5101	ECEA0JKA101	ELECTROLYTIC 6.3V 100UF	
C5102	ECJ2VF1H103Z	C CHIP 50V 0.01UF	

Ref. No.	Part No.	Part Name & Description	Remarks
C5103	ECJ2VF1H103Z	C CHIP 50V 0.01UF	
C5104	ECJ2VC1H220J	C CHIP 50V 22PF	
C5106	ECJ2VC1H181J	C CHIP 50V 180PF	
C5109	ECJ2VC1H121J	C CHIP 50V 120PF	
C5110	ECJ2VC1H150J	C CHIP 50V 15PF	
C5111	ECJ2VC1H181J	C CHIP 50V 180PF	
C5112	ECJ2VF1H103Z	C CHIP 50V 0.01UF	
C5113	ECJ2VC1H680J	C CHIP 50V 68PF	
C5114	ECJ2VF1H103Z	C CHIP 50V 0.01UF	
C5115	ECEA0JKA221	ELECTROLYTIC 6.3V 220UF	
C5116	ECJ2VF1H103Z	C CHIP 50V 0.01UF	
C5117	ECJ2VF1H103Z	C CHIP 50V 0.01UF	
C5118	ECJ2VF1H103Z	C CHIP 50V 0.01UF	
C5119	ECJ2VC1H270J	C CHIP 50V 27PF	
C5120	ECJ2VC1H270J	C CHIP 50V 27PF	
C5121	ECJ2VC1H470J	C CHIP 50V 47P	
C5122	ECEA1EKA100I	ELECTROLYTIC 25V 10UF	
C5123	ECEA0JKA101	ELECTROLYTIC 6.3V 100UF	
C5124	ECJ2VC1H221J	C CHIP 50V 220P	
C5125	ECJ2VF1H103Z	C CHIP 50V 0.01UF	
C5126	ECEA1HKA010	ELECTROLYTIC 50V 1UF	
C5127	ECJ2VF1H103Z	C CHIP 50V 0.01UF	
C5129	ECJ2VF1H103Z	C CHIP 50V 0.01UF	
C5130	ECEA0JKA221	ELECTROLYTIC 6.3V 220UF	
C5131	ECEA0JKA101	ELECTROLYTIC 6.3V 100UF	
C5132	ECEA1HKN010I	ELECTROLYTIC 50V 1UF	
C5133	ECJ2VF1H103Z	C CHIP 50V 0.01UF	
C5134	ECJ2VF1H103Z	C CHIP 50V 0.01UF	
C5140	ECJ2VC1H150J	C CHIP 50V 15PF	
C5141	ECJ2VC1H680J	C CHIP 50V 68PF	
C5142	ECJ2VC1H121J	C CHIP 50V 120PF	
C5143	ECJ2VC1H181J	C CHIP 50V 180PF	
C5151	ECEA1CKA470	ELECTROLYTIC 16V 47UF	
C5301	ECEA1CKN100	ELECTROLYTIC 16V 10UF	
C5302	ECEA1EKA4R7	ELECTROLYTIC 25V 4.7UF	
C5303	ECEA1HKAR47	ELECTROLYTIC 50V 0.47UF	
C5305	ECEA1HKA010	ELECTROLYTIC 50V 1UF	
C5306	ECEA1CKA100	ELECTROLYTIC 16V 10UF	
C5307	ECEA1CKA100	ELECTROLYTIC 16V 10UF	
C5351	ECEA1CKA100	ELECTROLYTIC 16V 10UF	
C5352	ECEA1CKA100	ELECTROLYTIC 16V 10UF	
C5353	ECJ2VC1H220J	C CHIP 50V 22PF	
C5356	ECEA1CKA100	ELECTROLYTIC 16V 10UF	
C5381	ECJ2VC1H560J	C CHIP 50V 56PF	
C5382		ELECTROLYTIC 50V 2.2UF	
C5384	ECJ2VF1H103Z	C CHIP 50V 0.01UF	
C5401		C CHIP 16V 0.22UF	
C5402		C CHIP 50V 2200PF	
C5403	ECEA1HKA2R2	ELECTROLYTIC 50V 2.2UF	
C5501		C CHIP 25V 0.018UF	
C5502		C CHIP 50V 680PF	
C5505	ECEA1CKA470	ELECTROLYTIC 16V 47UF	
C5506	ECJ2VF1H103Z	C CHIP 50V 0.01UF	
C5507	ECEA1CKA100	ELECTROLYTIC 16V 10UF	

Ref. No.	Part No.	Part Name & Description	Remarks
C5508	ECUV1H221JSN	C CHIP 50V 220PF	
C5510	ECEA1HKA010	ELECTROLYTIC 50V 1UF	
C5511	ECJ2VB1E333K	C CHIP 25V 0.033UF	
C5516	ECJ2VB1E333K	C CHIP 25V 0.033UF	
C5601	ECJ2VF1H103Z	C CHIP 50V 0.01UF	
C5602	ECJ2VB1E104K	C CHIP 25V 0.1UF	
C5603	ECJ2VC1H150J	C CHIP 50V 15PF	
C5604	ECEA1HKA010	ELECTROLYTIC 50V 1UF	
C5605	ECJ2VB1E153K	C CHIP 25V 0.015UF	
C5611	ECJ2VF1H103Z	C CHIP 50V 0.01UF	
C5612	ECJ2VF1H103Z	C CHIP 50V 0.01UF	
C5613	ECJ2VC1H220J	C CHIP 50V 22PF	
C5614	ECJ2VF1E104Z	C CHIP 25V 0.1UF	
C5616	ECJ2VF1H103Z	C CHIP 50V 0.01UF	
C5617	ECJ2VF1E104Z	C CHIP 25V 0.1UF	
C5619	ECJ2VF1H103Z	C CHIP 50V 0.01UF	
C5902	ECEA1CKA470	ELECTROLYTIC 16V 47UF	
C5903	ECEA1CKA470	ELECTROLYTIC 16V 47UF	
C5904	ECJ2VF1H103Z	C CHIP 50V 0.01UF	
C5905	ECEA0JKA101	ELECTROLYTIC 6.3V 100UF	
C5906	ECJ2VF1H103Z	C CHIP 50V 0.01UF	
C5932	ECJ2VF1H103Z	C CHIP 50V 0.01UF	
C6001	ECEA0JKA331	ELECTROLYTIC 6.3V 330UF	
C6002	ECJ2VC1H080C	C CHIP 50V 8PF	
C6003	ECJ2VC1H100C	C CHIP 50V 10PF	
C6004	ECJ2VB1E104K	C CHIP 25V 0.1UF	
C6006	ECEA0JKA101	ELECTROLYTIC 6.3V 100UF	
C6009	ECEA1CKS100	ELECTROLYTIC 16V 10UF	
C6013	ECJ2VC1H101J	C CHIP 50V 100PF	
C6017	ECJ2VC1H101J	C CHIP 50V 100PF	
C6018	ECJ2VC1H101J	C CHIP 50V 100PF	
C6020	ECJ2VF1H104Z	C CHIP 50V 0.1UF	
C6021	ECEA0JKA101	ELECTROLYTIC 6.3V 100UF	
C6029	ECJ2VF1H104Z	C CHIP 50V 0.1UF	
C6044	ECJ2VF1E104Z	C CHIP 25V 0.1UF	
C6212	ECJ2VF1H104Z	C CHIP 50V 0.1UF	
C6213	ECEA0JKS331I	ELECTROLYTIC 6.3V 330UF	
C6302	ECJ2VF1H104Z	C CHIP 50V 0.1UF	
C6401	ECJ2VF1H104Z	C CHIP 50V 0.1UF	
C6402	ECEA0JKA101	ELECTROLYTIC 6.3V 100UF	
C6403	ECEA1HKA010	ELECTROLYTIC 50V 1UF	
C6404	ECJ2VC1H121J	C CHIP 50V 120PF	
C6406	ECEA1HKS010	ELECTROLYTIC 50V 1UF	
C6408	ECJ2VB1H222K	C CHIP 50V 2200PF	
C6410	ECJ2VB1H103K	C CHIP 50V 0.01UF	

COILS

		Part Name & Description	Remarks
L1501	ELF15N005A	LINE FILTER 0.5A 18MH	Δ
L1501	ELF18D290A	LINE FILTER 0.5A 18MH	Δ
L1501	G0B183D00001	LINE FILTER 0.5A 18MH	Δ
L1501	J0HBLD000001	LINE FILTER 0.5A 18MH	Δ
L1501	VLQS0167	LINE FILTER 0.5A 18MH	Δ
L1501	VLQS0170	LINE FILTER 0.6A 18MH	Δ
L1502	J0JHB0000021	FILTER	
L1503	J0JHB0000021	FILTER	
L1504	VLQSAB7D220K	COIL 22UH	
L1505	VLQSAB7D220K	COIL 22UH	
L1506	VLQS0165	COIL 22UH	
L1507	ELEXT101KE04	COIL 100UH	
L1508	VLQSAB7D100K	COIL 10UH	
L1509	VLQSAB7D100K	COIL 10UH	
L4701	ELESN101KA	COIL 100UH	
L5101	ELESN150KA	COIL 15UH	
L5102	ELESN330KA	COIL 33UH	
L5103	ELESN1R5KA	COIL 1.5UH	
L5105	ELESN4R7KA	COIL 4.7UH	
L5107	ELESN470KA	COIL 47UH	
L5109	ELESN101KA	COIL 100UH	
L5110	ELESN6R8KA	COIL 6.8UH	
L5111	ELESN150KA	COIL 15UH	
L5112	G0ZZ00001933	COIL	
L5114	ELESN4R7KA	COIL 4.7UH	
L5115	ELESN6R8KA	COIL 6.8UH	
L5116	ELESN150KA	COIL 15UH	
L5301	ERJ6GEY0R00V	MGF CHIP 1/10W 0	
L5302	ERJ6GEY0R00V	MGF CHIP 1/10W 0	
L5303	ERJ6GEY0R00V	MGF CHIP 1/10W 0	
L5901	ELESN101KA	COIL 100UH	
L6401	ELEXT101KE04	COIL 100UH	
L6402	J0JBC0000022	CHIP BEAD INDUCTOR	
L6403	J0JBC0000022	CHIP BEAD INDUCTOR	
L6404	J0JBC0000022	CHIP BEAD INDUCTOR	
L6405	J0JBC0000022	CHIP BEAD INDUCTOR	

CRYSTAL OSCILLATOR

Ref. No.	Part No.	Part Name & Description	Remarks
X5501	H2A503300012	CRYSTAL OSCILLATOR	
X5601	VSXS0208-A	CRYSTAL OSCILLATOR	
X6001	VSXS0784	CRYSTAL OSCILLATOR	

PIN HEADERS

Ref. No.	Part No.	Part Name & Description	Remarks
P1501	LSJP0814	CONNECTOR 2P	
P1502	VJSS0875	CONNECTOR RECEPTACLE 13P	
P4004	VJSS0875	CONNECTOR RECEPTACLE 13P	
P4005	LSJWR7N220AC	CPNNECTOR CABLE W/OUTPLUG,AC 18V	
P4007	K1KB19A00007	CONNECTOR 19P	
P4502	K1KA02A00229	CONNECTOR 2P	
P4503	K1KA02A00229	CONNECTOR 2P	
P4591	LSJWR5N240AC	CONNECTOR CABLE W/OUT PLUG,DC 5V	
P5301	K1KA06A00220	CONNECTOR 6P (B,C)	
P5302	K1MP04A00006	WIRE TRAP (A)	
P5401	K1KB19A00007	CONNECTOR 19P	
P6001	K1KA05A00177	CONNECTOR 5P	
P6002	VJSS0875	CONNECTOR RECEPTACLE 13P	
P6003	VJSS0875	CONNECTOR RECEPTACLE 13P	

SWITCHES

Ref. No.	Part No.	Part Name & Description	Remarks
SW6301	EVQ21405R	SWITCH PUSH	
SW6302	EVQ21405R	SWITCH PUSH	
SW6304	EVQ21405R	SWITCH PUSH	
SW6305	EVQ21405R	SWITCH PUSH	
SW6309	EVQ21405R	SWITCH PUSH	
SW6310	EVQ21405R	SWITCH PUSH	
SW6311	EVQ21405R	SWITCH PUSH	
SW6312	EVQ21405R	SWITCH PUSH	
SW6313	EVQ21405R	SWITCH PUSH	
SW6314	EVQ21405R	SWITCH PUSH	
SW6315	EVQ21405R	SWITCH PUSH	

FUSE & PROTECTOR

Ref. No.	Part No.	Part Name & Description	Remarks
F1501	VSFS0003A16	FUSE 125V 1.6A	Δ
F1501	K5D162AB0003	FUSE 125V 1.6A	Δ
F1501	K5D162ADA001	FUSE 125V 1.6A	Δ
F1501	K5D162AQ0004	FUSE 125V 1.6A	Δ
PR1501	LSSF009A10E	IC PROTECTOR	Δ
PR1502	UNH000600A	IC PROTECTOR 1.5A	Δ
PR1502	B1ZAZ0000040	IC PROTECTOR 1.5A	Δ
PR1502	LSSF009A25E	IC PROTECTOR 1.5A	Δ
PR1503	LSSF009A10E	IC PROTECTOR	Δ
PR1504	UNH000600A	IC PROTECTOR 1.5A	Δ
PR1504	B1ZAZ0000040	IC PROTECTOR 1.5A	Δ
PR1504	LSSF009A25E	IC PROTECTOR 1.5A	Δ
PR1505	LSSF009A35E	IC PROTECTOR	Δ

TRANSFORMER

Ref. No.	Part No.	Part Name & Description	Remarks
T1501	LSTP0122	TRANSFORMER POWER	Δ

JACKS

Ref. No.	Part No.	Part Name & Description	Remarks
JK4591	K2HC103B0047	EARPHONE JACK SOCKET	
JK4701	LSJJ0168	FRONT AUDIO/VIDEO JACK SOCKET	
JK5301	K1CB104B0040	S-VIDEO JACK SOCKET	

PRINTED CIRCUIT BOARD ASSEMBLY

Ref. No.	Part No.	Part Name & Description	Remarks
E11	LSEP2029B	AUDIO C.B.A.	

MISCELLANEOUS

Ref. No.	Part No.	Part Name & Description	Remarks
272	TMM77412	CLAMPER	
711	PNA4611M00HC	INFRARED RECEIVER UNIT	
771	EYF52BC	FUSE HOLDER	
793	LSMP0354	PCB SUPPORTER	

12.3.2. AUDIO C.B.A.

INTEGRATED CIRCUITS

Ref. No.	Part No.	Part Name & Description	Remarks
IC4301	C0JBAR000002	IC, CMOS STANDARD LOGIC	E.S.D.
IC4301	CD4052BCM	IC, CMOS STANDARD LOGIC	E.S.D.
IC4302	UPC4570G	IC, LINEAR	
IC4303	C0JBAR000002	IC, CMOS STANDARD LOGIC	E.S.D.
IC4303	CD4052BCM	IC, CMOS STANDARD LOGIC	E.S.D.
IC4351	C0JBAR000292	IC, CMOS STANDARD LOGIC	E.S.D.
IC4351	CD4053BCM	IC, CMOS STANDARD LOGIC	E.S.D.
IC4352	UPC4570G	IC, LINEAR	
IC4601	BD3867S	IC, LOGIC(OTHER)	E.S.D.
IC9001	CXA2064M	IC, LINEAR	
IC9201	AN7420-NT	IC, LINEAR	

TRANSISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
Q4301	UNR221200L	TRANSISTOR SI NPN CHIP	
Q4301	B1GBCFLL0002	TRANSISTOR SI NPN CHIP	
Q4302	UNR221200L	TRANSISTOR SI NPN CHIP	
Q4302	B1GBCFLL0002	TRANSISTOR SI NPN CHIP	
Q4303	UNR221200L	TRANSISTOR SI NPN CHIP	
Q4303	B1GBCFLL0002	TRANSISTOR SI NPN CHIP	
Q4304	UNR221200L	TRANSISTOR SI NPN CHIP	
Q4304	B1GBCFLL0002	TRANSISTOR SI NPN CHIP	
Q4352	2SD0601A0L	TRANSISTOR SI NPN CHIP	
Q4352	B1ABCF000011	TRANSISTOR SI NPN CHIP	
Q4353	UNR221200L	TRANSISTOR SI NPN CHIP	
Q4353	B1GBCFLL0002	TRANSISTOR SI NPN CHIP	
Q4354	UNR211L00L	TRANSISTOR SI PNP CHIP	
Q4355	UNR221L00L	TRANSISTOR SI PNP CHIP	
Q9001	2SD0601A0L	TRANSISTOR SI NPN CHIP	
Q9001	B1ABCF000011	TRANSISTOR SI NPN CHIP	
Q9002	2SD0601A0L	TRANSISTOR SI NPN CHIP	
Q9002	B1ABCF000011	TRANSISTOR SI NPN CHIP	
Q9003	2SD0601A0L	TRANSISTOR SI NPN CHIP	
Q9003	B1ABCF000011	TRANSISTOR SI NPN CHIP	
Q9004	2SD0601A0L	TRANSISTOR SI NPN CHIP	
Q9004	B1ABCF000011	TRANSISTOR SI NPN CHIP	

DIODES

Ref. No.	Part No.	Part Name & Description	Remarks
D4353	MA2C165001VT	DIODE SI	
D4353	B0AACK000004	DIODE SI	
D4353	1SS119	DIODE SI	
D4354	MA2C165001VT	DIODE SI	
D4354	B0AACK000004	DIODE SI	
D4354	1SS119	DIODE SI	
D9001	MA2C165001VT	DIODE SI	
D9001	B0AACK000004	DIODE SI	
D9001	1SS119	DIODE SI	

RESISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
R4302	ERJ6GEYJ104V	MGF CHIP 1/10W 100K	
R4303	ERJ6GEYJ104V	MGF CHIP 1/10W 100K	
R4304	ERJ6GEYJ104V	MGF CHIP 1/10W 100K	
R4305	ERJ6GEYJ104V	MGF CHIP 1/10W 100K	
R4306	ERJ6GEYJ104V	MGF CHIP 1/10W 100K	
R4307	ERJ6GEYJ104V	MGF CHIP 1/10W 100K	
R4308	ERJ6GEYJ183V	MGF CHIP 1/10W 18K	
R4309	ERJ6GEYJ104V	MGF CHIP 1/10W 100K	
R4310	ERJ6GEYJ333V	MGF CHIP 1/10W 33K	
R4311	ERJ6GEYJ104V	MGF CHIP 1/10W 100K	
R4312	ERJ6GEYJ333V	MGF CHIP 1/10W 33K	
R4313	ERJ6GEYJ183V	MGF CHIP 1/10W 18K	
R4314	ERJ6GEYJ183V	MGF CHIP 1/10W 18K	
R4315	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R4316	ERJ6GEYJ183V	MGF CHIP 1/10W 18K	
R4317	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R4318	ERJ6GEYJ104V	MGF CHIP 1/10W 100K	
R4319	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R4320	ERJ6GEYJ104V	MGF CHIP 1/10W 100K	
R4321	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R4322 R4323	ERJ6GEYJ103V ERJ6GEYJ103V	MGF CHIP 1/10W 10K MGF CHIP 1/10W 10K	
R4323	ERJ6GEYJ562V	MGF CHIP 1/10W 10K	
R4353	ERJ6GEYJ472V	MGF CHIP 1/10W 4.7K	
R4354	ERJ6GEYJ472V	MGF CHIP 1/10W 4.7K	
R4355	ERJ6GEYJ473V	MGF CHIP 1/10W 47K	
R4356	ERJ6GEYJ101V	MGF CHIP 1/10W 100	
R4357 R4358	ERJ6GEYJ101V ERJ6GEYJ473V	MGF CHIP 1/10W 100 MGF CHIP 1/10W 47K	
R4359	ERJ6GEYJ104V	MGF CHIP 1/10W 100K	
R4360	ERJ6GEYJ104V	MGF CHIP 1/10W 100K	
R4362	ERJ6GEYJ104V	MGF CHIP 1/10W 100K	
R4364	ERJ6GEYJ104V	MGF CHIP 1/10W 100K	
R4365	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R4366	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R4367	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R4368		MGF CHIP 1/10W 100K	
R4369		MGF CHIP 1/10W 100	
R4370		MGF CHIP 1/10W 100K	
R4371		MGF CHIP 1/10W 100	
R4601		MGF CHIP 1/10W 1M MGF CHIP 1/10W 390K	
R4602			
R4603		MGF CHIP 1/10W 4.7K	
R4604		MGF CHIP 1/10W 4.7K	
R4605		MGF CHIP 1/10W 4.7K	
R4606		MGF CHIP 1/10W 4.7K	
R4607		MGF CHIP 1/10W 100	
R4608		MGF CHIP 1/10W 100	
R9001	EVNCYAA03B14		
R9002		MGF CHIP 1/10W 68K	
R9003	EVNDCAA03B14		
R9004		MGF CHIP 1/10W 2.2K	
R9005	ERJ6GEYJ105V	MGF CHIP 1/10W 1M	
R9006	ERJ6GEYJ104V	MGF CHIP 1/10W 100K	

Ref. No.	Part No.	Part Name & Description	Remarks
R9007	ERJ6GEYJ392V	MGF CHIP 1/10W 3.9K	
R9008	EVMAASA00B53	VARIABLE 5K	
R9009	ERJ6GEYJ332V	MGF CHIP 1/10W 3.3K	
R9010	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R9011	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R9012	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R9017	ERJ6GEYJ821V	MGF CHIP 1/10W 820	
R9018	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R9019	ERJ6GEYJ333V	MGF CHIP 1/10W 33K	
R9020	ERJ6GEYJ333V	MGF CHIP 1/10W 33K	
R9021	ERJ6GEYJ333V	MGF CHIP 1/10W 33K	
R9022	ERJ6GEYJ333V	MGF CHIP 1/10W 33K	
R9023	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R9024	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R9201	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R9202	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R9203	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R9204	ERJ6GEYJ224V	MGF CHIP 1/10W 220K	
R9205	ERJ6GEYJ332V	MGF CHIP 1/10W 3.3K	
R9206	EVMAASA00B53	VARIABLE 5K	
R9207	ERJ6GEYJ332V	MGF CHIP 1/10W 3.3K	
R9208	ERJ6GEYJ392V	MGF CHIP 1/10W 3.9K	
R9209	ERJ6GEYJ272V	MGF CHIP 1/10W 2.7K	
R9210	ERJ6GEY0R00V	MGF CHIP 1/10W 0	
R9211	ERJ6GEY0R00V	MGF CHIP 1/10W 0	

CAPACITORS

Ref. No.	Part No.	Part Name & Description	Remarks
C4301	ECEA1CKA101I	ELECTROLYTIC 16V 100UF	
C4302	ECJ2VF1H103Z	C CHIP 50V 0.01UF	
C4303	ECEA1CKA100	ELECTROLYTIC 16V 10UF	
C4304	ECEA1CKA100	ELECTROLYTIC 16V 10UF	
C4305	ECJ2VF1H103Z	C CHIP 50V 0.01UF	
C4306	ECEA1CKA100	ELECTROLYTIC 16V 10UF	
C4307	ECEA1CKA100	ELECTROLYTIC 16V 10UF	
C4308	ECJ2VF1H103Z	C CHIP 50V 0.01UF	
C4352	ECEA1CKA100	ELECTROLYTIC 16V 10UF	
C4353	ECJ2VF1H103Z	C CHIP 50V 0.01UF	
C4354	ECJ2VF1H103Z	C CHIP 50V 0.01UF	
C4355	ECEA1CKA470	ELECTROLYTIC 16V 47UF	
C4356	ECEA1CKA100	ELECTROLYTIC 16V 10UF	
C4357	ECEA1CKA100	ELECTROLYTIC 16V 10UF	
C4358	ECJ2VF1H103Z	C CHIP 50V 0.01UF	
C4359	ECEA1CKA470	ELECTROLYTIC 16V 47UF	
C4361	ECEA1CKA100	ELECTROLYTIC 16V 10UF	
C4362	ECEA1CKA100	ELECTROLYTIC 16V 10UF	
C4365	ECEA1CKA101I	ELECTROLYTIC 16V 100UF	
C4366	ECJ2VF1H103Z	C CHIP 50V 0.01UF	
C4601	ECEA1EKA4R7	ELECTROLYTIC 25V 4.7UF	
C4602	ECEA1CKA100	ELECTROLYTIC 16V 10UF	
C4603	ECJ2VB1E683K	C CHIP 25V 0.068UF	
C4604	ECJ2VB1H102K	C CHIP 50V 1000PF	
C4605	ECEA1CKA100	ELECTROLYTIC 16V 10UF	

Ref. No.	Part No.	Part Name & Description	Remarks
C4606	ECEA1CKA100	ELECTROLYTIC 16V 10UF	
C4612	ECEA1EKA4R7	ELECTROLYTIC 25V 4.7UF	
C4613	ECEA1EKA4R7	ELECTROLYTIC 25V 4.7UF	
C4614	ECEA1EKA4R7	ELECTROLYTIC 25V 4.7UF	
C4615	ECEA1EKA4R7	ELECTROLYTIC 25V 4.7UF	
C4616	ECJ2VF1E104Z	C CHIP 25V 0.1UF	
C4617	ECJ2VF1E104Z	C CHIP 25V 0.1UF	
C4618	ECEA1CKA100	ELECTROLYTIC 16V 10UF	
C4619	ECJ2VB1H102K	C CHIP 50V 1000PF	
C4620	ECJ2VB1E683K	C CHIP 25V 0.068UF	
C4621	ECEA1CKA100	ELECTROLYTIC 16V 10UF	
C4622	ECEA1CKA100	ELECTROLYTIC 16V 10UF	
C4623	ECA1CM471B	ELECTROLYTIC 16V 470UF	
C9001	ECEA1EKA4R7	ELECTROLYTIC 25V 4.7UF	
C9002	ECEA1EKA4R7	ELECTROLYTIC 25V 4.7UF	
C9003	ECEA1EKA4R7	ELECTROLYTIC 25V 4.7UF	
C9004	ECEA1EKA4R7	ELECTROLYTIC 25V 4.7UF	
C9005	ECEA1CKA100	ELECTROLYTIC 16V 10UF	
C9006	ECEA1HKA010	ELECTROLYTIC 50V 1UF	
C9007	ECJ2VB1H562K	C CHIP 50V 5600PF	
C9008	ECJ2VB1E123K	C CHIP 25V 0.012UF	
C9009	ECEA1EKN4R7I	ELECTROLYTIC 25V 4.7UF	
C9010	ECEA1HKA010	ELECTROLYTIC 50V 1UF	
C9011	ECEA1CKA100	ELECTROLYTIC 16V 10UF	
C9012	ECEA1CKA100	ELECTROLYTIC 16V 10UF	
C9013	ECEA1CKA100	ELECTROLYTIC 16V 10UF	
C9014	ECEA1EKN4R7I	ELECTROLYTIC 25V 4.7UF	
C9015	ECEA1HKA3R3I	ELECTROLYTIC 50V 3.3UF	
C9016	ECEA1EKN4R7I	ELECTROLYTIC 25V 4.7UF	
C9017	ECJ2VB1E473K	C CHIP 25V 0.047UF	
C9018	ECJ2VB1H272K	C CHIP 50V 2700PF	
C9019	ECJ2VF1H103Z	C CHIP 50V 0.01UF	
C9020	ECEA1CKA220	ELECTROLYTIC 16V 22UF	
C9021	ECEA1CKA220	ELECTROLYTIC 16V 22UF	
C9022	ECJ2VF1H103Z	C CHIP 50V 0.01UF	
C9201	ECJ2VF1H103Z	C CHIP 50V 0.01UF	
C9202	ECEA0JKA470	ELECTROLYTIC 6.3V 47UF	
C9203	ECEA1CKA100	ELECTROLYTIC 16V 10UF	
C9204	ECQP1H102JZ3	POLYESTER 50V 1000PF	
C9205	ECEA1HKA010	ELECTROLYTIC 50V 1UF	
C9206	ECEA1HKA3R3I	ELECTROLYTIC 50V 3.3UF	
C9207	ECEA1HKA010	ELECTROLYTIC 50V 1UF	
C9208	ECJ2VB1E223K	C CHIP 25V 0.022	
C9209	ECJ2VB1E223K	C CHIP 25V 0.022	
C9210	ECEA1HKA010	ELECTROLYTIC 50V 1UF	
C9211	ECEA1HKA010	ELECTROLYTIC 50V 1UF	

COILS

Ref. No.	Part No.	Part Name & Description	Remarks
L4351	ELESN101KA	COIL 100UH	
L4601	G0C101KA0045	COIL 100UH	
L9001	ELESN101KA	COIL 100UH	
L9201	ELESN101KA	COIL 100UH	

PIN HEADERS

Ref. No.	Part No.	Part Name & Description	Remarks
P4201	VJHS0294	PIN HEADER 4P	
P4202	VJHS0298	PACK PIN 8P	
P4203	VJHS0298	PACK PIN 8P	
P4204	VJHS0298	PACK PIN 8P	
P4205	VJHS0299	PACK PIN 9P	
P4206	VJHS0298	PACK PIN 8P	
P4209	VEKS5841	CONNECTOR CABLE W/PLUG,AC 6V	

MISCELLANEOUS

Ref. No.	Part No.	Part Name & Description	Remarks
713	VMAS1912	P.C.B. SUPPORT ANGLE	

12.3.3. TUNER MAIN C.B.A.

INTEGRATED CIRCUITS

Ref. No.	Part No.	Part Name & Description	Remarks
IC4501	C1BA00000217	IC, LINEAR	
IC9551	UPC4570G	IC, LINEAR	

TRANSISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
Q4501	2SD13280TL	TRANSISTOR SI NPN CHIP	
Q4502	2SD13280TL	TRANSISTOR SI NPN CHIP	
Q4503	2SD2159-T	TRANSISTOR SI NPN	
Q4503	2SD1581-T	TRANSISTOR SI NPN	
Q7001	2SB0709A0L	TRANSISTOR SI PNP CHIP	
Q7001	B1ADCF000001	TRANSISTOR SI PNP CHIP	

DIODES

Ref. No.	Part No.	Part Name & Description	Remarks
D4501	MA2C165001VT	DIODE SI	
D4501	B0AACK000004	DIODE SI	
D4501	1SS119	DIODE SI	
D4502	MA2C165001VT	DIODE SI	
D4502	B0AACK000004	DIODE SI	
D4502	1SS119	DIODE SI	
D9501	MA2C165001VT	DIODE SI	
D9502	MA2C165001VT	DIODE SI	
D9505	MAZ40910MF	DIODE ZENER 9.1V	
D9505	B0BA8R700009	DIODE ZENER 9.1V	
D9505	RD9.1ESAB2	DIODE ZENER 9.1V	
D9551	MA2C165001VT	DIODE SI	
D9552	MA2C165001VT	DIODE SI	
D9561	MA2C165001VT	DIODE SI	
D9562	MA2C165001VT	DIODE SI	

RESISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
R1601	ERJ6GEYJ331V	MGF CHIP 1/10W 330	
R4501	ERJ6GEYJ683V	MGF CHIP 1/10W 68K	
R4502	ERJ6GEYJ683V	MGF CHIP 1/10W 68K	
R4503	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R4504	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R4505	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R4506	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R4507	ERJ6GEYJ104V	MGF CHIP 1/10W 100K	
R4508	ERJ6GEYJ104V	MGF CHIP 1/10W 100K	
R4509	ERJ6GEY0R00V	MGF CHIP 1/10W 0	
R4510	ERJ6GEY0R00V	MGF CHIP 1/10W 0	
R4513	ERJ6GEYJ151V	MGF CHIP 1/10W 150	
R4514	ERJ6GEYJ151V	MGF CHIP 1/10W 150	
R4515	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R4516	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R4519	ERDS2TJ4R7	CARBON 1/4W 4.7	
R4520	ERDS2TJ4R7	CARBON 1/4W 4.7	
R4521	ERDS2TJ4R7	CARBON 1/4W 4.7	
R4522	ERDS2TJ4R7	CARBON 1/4W 4.7	
R4523	ERJ6GEYJ561V	MGF CHIP 1/10W 560	
R7001	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R7002	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R7003	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R7004	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R7005	ERJ6GEY0R00V	MGF CHIP 1/10W 0	
R7006	ERJ6GEYJ271V	MGF CHIP 1/10W 270	
R7007	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R7008	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R9501	ERJ6GEYJ750V	MGF CHIP 1/10W 75	
R9502	ERJ6GEYJ750V	MGF CHIP 1/10W 75	
R9551	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R9552	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R9553	ERJ6GEYJ473V	MGF CHIP 1/10W 47K	
R9554	ERJ6GEYJ473V	MGF CHIP 1/10W 47K	

CAPACITORS

Ref. No.	Part No.	Part Name & Description	Remarks
C1601	ECJ2VC1H270J	C CHIP 50V 27PF	
C1602	ECJ2VB1E104K	C CHIP 25V 0.1UF	
C1603	ECEA1EKA4R7	ELECTROLYTIC 25V 4.7UF	
C4501	ECA1CM101B	ELECTROLYTIC 16V 100UF	
C4502	ECA1CM101B	ELECTROLYTIC 16V 100UF	
C4503	ECJ2VB1H222K	C CHIP 50V 2200PF	
C4504	ECJ2VB1H222K	C CHIP 50V 2200PF	
C4505	ECJ2VB1H222K	C CHIP 50V 2200PF	
C4506	ECJ2VB1H222K	C CHIP 50V 2200PF	
C4507	ECA1HM4R7B	ELECTROLYTIC 50V 4.7UF	
C4508	ECA1HM4R7B	ELECTROLYTIC 50V 4.7UF	
C4509	ECA1EM470B	ELECTROLYTIC 25V 47UF	
C4510	ECA1EM470B	ELECTROLYTIC 25V 47UF	
C4511	ECQB1H104KF	POLYESTER 50V 0.1UF	
C4512	ECQB1H104KF	POLYESTER 50V 0.1UF	
C4513	ECA1CM102B	ELECTROLYTIC 16V 1000UF	
C4514	ECA1CM102B	ELECTROLYTIC 16V 1000UF	
C4515	ECA1EM101B	ELECTROLYTIC 25V 100UF	
C4516	ECA1EM102B	ELECTROLYTIC 25V 1000UF	
C4518	ECA1EM471B	ELECTROLYTIC 25V 470UF	
C4519	ECA1EM101B	ELECTROLYTIC 25V 100UF	
C4525	ECJ2VF1H103Z	C CHIP 50V 0.01UF	
C7002	ECJ2VB1H102K	C CHIP 50V 1000PF	
C7003	ECJ2VC1H330J	C CHIP 50V 33PF	
C7005	ECJ2VC1H330J	C CHIP 50V 33PF	
C7006	ECA0JM102B	ELECTROLYTIC 6.3V 1000UF	
C7007	ECJ2VB1H102K	C CHIP 50V 1000PF	
C7008	ECJ2VF1H103Z	C CHIP 50V 0.01UF	
C7010	ECEA1CKA100	ELECTROLYTIC 16V 10UF	
C7011	ECJ2VB1H222K	C CHIP 50V 2200PF	
C7012	ECJ2VB1H222K	C CHIP 50V 2200PF	
C9551	ECJ2VC1H101J	C CHIP 50V 100PF	
C9552	ECJ2VC1H101J	C CHIP 50V 100PF	
C9553	ECJ2VF1H103Z	C CHIP 50V 0.01UF	
C9555	ECEA1CKA100	ELECTROLYTIC 16V 10UF	
C9556	ECEA1CKA100	ELECTROLYTIC 16V 10UF	
C9557	ECEA1CKA100	ELECTROLYTIC 16V 10UF	

COILS

Ref. No.	Part No.	Part Name & Description	Remarks
L1601	LSLF0035	EMI FILTER CHIP	
L1602	ELESN220KA	COIL 22UH	
L1603	J0JBC0000023	EMI FILTER	
L4501	VLQSAB7D680K	COIL 68UH	
L7002	VLQSAB7D100K	COIL 10UH	
L9551	ELESN101KA	COIL 100UH	

PIN HEADERS

Ref. No.	Part No.	Part Name & Description	Remarks
P4504	K1MP05A00008	CONNECTOR 5P	
P4506	VEKS5846	CONNECTOR CABLE W/PLUG,DC 23V	
P4508	K1MP07A00005	7PIN WIRE TRAP	
P7003	VJPS0771	CONNECTOR PLUG 13P	
P7101	VJPS0772	CONNECTOR PLUG 19P	
P9503	K1KA04A00242	CONNECTOR 4P	

JACKS

Ref. No.	Part No.	Part Name & Description	Remarks
JK1601	K7AAAB000009	IC, CMOS STNADARD LOGIC	
JK9501	K1CB104B0040	S-VIDEO JACK SOCKET	
JK9502	K2HA305B0003	AUDIO/VIDEO JACK SOCKET	
JK9503	K2HA203B0011	AUDIO/VIDEO JACK SOCKET	

MISCELLANEOUS

Ref. No.	Part No.	Part Name & Description	Remarks
154	TMM5439-1	CLAMPER	
244	TUX77809	CLAMPER	
432	XTV3+8JR	TAPPING SCREW,STEEL	
483	XYN3+F10S	SCREW W/WASHER,STEEL	
497	XTV3+10J	TAPPING SCREW,SCREW	
743	ENG36709GL	TUNER,UHF/VHF NR	
753	LSSC0256	AUDIO OUTPUT HEAT SINK	
796	LSEQ0647	SHIELD PLATE UNIT	

12.3.4. TV MAIN C.B.A.

COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-20DF62	Α
PV-27DF62	В
PV-27DF62-K	С

INTEGRATED CIRCUITS

Ref. No.	Part No.	Part Name & Description	Remarks
IC451	C1AA00000024	IC, LINEAR	
IC752	AN1358S-E1	IC, LINEAR (B,C)	
IC752	AN1358S-NSC	IC, LINEAR (B,C)	
IC752	AN1358S-P-E1	IC, LINEAR (B,C)	
IC752	C0AABA000015	IC, LINEAR (B,C)	
IC752	C0ABBA000021	IC, LINEAR (B,C)	
IC850	C5HABZZ00103	IC, HYBRID	∆ _{E.S.D.}
IC851	0N3131-R.KT	IC, LINEAR	Δ
IC851	0N3131-S.KT	IC, LINEAR	Δ
IC852	SE115N	IC, LINEAR (A)	
IC852	C0EAS0000026	IC, LINEAR (B,C)	

TRANSISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
Q431	2SA1309ARSTA	TRANSISTOR SI PNP	
Q501	2SC3941H	TRANSISTOR SI NPN	
Q523	B1ACBM000001	TRANSISTOR SI NPN	
Q523	2SA1767-Q	TRANSISTOR SI NPN	
Q523	2SB1221-Q	TRANSISTOR SI NPN	
Q551	B1BAER000006	TRANSISTOR SI NPN (A)	Δ
Q551	B1BAFR000004	TRANSISTOR SI NPN (B,C)	Δ
Q571	2SD1819A0L	TRANSISTOR SI NPN CHIP	
Q571	B1ABCF000020	TRANSISTOR SI NPN CHIP	
Q591	2SC3311AIRTA	TRANSISTOR SI NPN	
Q591	2SC3311AISTA	TRANSISTOR SI NPN	
Q591	2SC3311ARA	TRANSISTOR SI NPN	
Q591	2SC3311ASA	TRANSISTOR SI NPN	
Q751	2SD1499-PLB	TRANSISTOR SI NPN (B,C)	
Q751	2SD1499-QLB	TRANSISTOR SI NPN (B,C)	
Q753	2SA1309AIRTA	TRANSISTOR SI PNP (B,C)	
Q753	2SA1309AISTA	TRANSISTOR SI PNP (B,C)	
Q753	2SA1309ARA	TRANSISTOR SI PNP (B,C)	
Q753	2SA1309ASA	TRANSISTOR SI PNP (B,C)	
Q754	2SC3311AIRTA	TRANSISTOR SI NPN (B,C)	
Q754	2SC3311AISTA	TRANSISTOR SI NPN (B,C)	
Q754	2SC3311ARA	TRANSISTOR SI NPN (B,C)	
Q754	2SC3311ASA	TRANSISTOR SI NPN (B,C)	
Q801	2SC3311AIRTA	TRANSISTOR SI NPN	
Q801	2SC3311AISTA	TRANSISTOR SI NPN	
Q801	2SC3311ARA	TRANSISTOR SI NPN	
Q801	2SC3311ASA	TRANSISTOR SI NPN	

DIODES

Ref. No.	Part No.	Part Name & Description	Remarks
D401	B0AAML000001	DIODE SI	
D401	1SR139-400	DIODE SI	
D402	MA2C165001VT	DIODE SI	
D402	B0AACK000004	DIODE SI	
D402	1SS119	DIODE SI	
D503	B0HAGP000011	DIODE SI	
D503	B0HAJP000012	DIODE SI	
D503	ERA22-04V1	DIODE SI	
D503	1SR153400T32	DIODE SI	
D504	MAZ40470MF	DIODE ZENER 4.7V (A)	
D504	B0BA4R600003	DIODE ZENER 4.7V (A)	
D504	RD4.7ESAB2	DIODE ZENER 4.7V (A)	
D505	MA2C165001VT	DIODE SI (A)	
D505	B0AACK000004	DIODE SI (A)	
D505	1SS119	DIODE SI (A)	
D506	MAZ42700MF	DIODE ZENER 27V (B,C)	
D553	B0HAGP000011	DIODE SI	
D553	B0HAJP000012	DIODE SI	
D553	ERA22-04V1	DIODE SI	
D553	1SR153400T32	DIODE SI	
D554	MA2C16700E	DIODE SI	
D554	4148-TA	DIODE SI	

Ref. No.	Part No.	Part Name & Description	Remarks
D555	MAZ40680MF	DIODE ZENER 6.8V	
D555	B0BA6R600008	DIODE ZENER 6.8V	
D555	RD6.8ESAB3	DIODE ZENER 6.8V	
D555	04AZ6.8ZTPA7	DIODE ZENER 6.8V	
D558	B0HAGP000011	DIODE SI	
D558	B0HAJP000012	DIODE SI	
D558	ERA22-04V1	DIODE SI	
D558	1SR153400T32	DIODE SI	
D571	RH3F014305	DIODE SI (B,C)	
D572	RU3ANLFC1	DIODE SI (B,C)	
D572	B0HAMR000060	DIODE SI (B,C)	
D591	D4DDD3R00002	THEARMISTOR	\triangle
D592	MA2C16700E	DIODE SI	
D592	4148-TA	DIODE SI	
D704	MA2C029TAF	DIODE SI (B,C)	
D752	MA2C165001VT	DIODE SI (B,C)	
D752	B0AACK000004	DIODE SI (B,C)	
D752	1SS119	DIODE SI (B,C)	
D801	ERZV10V361CS	SURGE ABSORBER	Δ
D801	D4EAA3610001	SURGE ABSORBER	Δ
D802	ERZV10V361CS	SURGE ABSORBER	Δ
D802	D4EAA3610001	SURGE ABSORBER	Δ
D803	MA2C16700E	DIODE SI	
D803	4148-TA	DIODE SI	
D804	B0AAKT000010	DIODE SI	Δ
D804	B0AAKT000009	DIODE SI	Δ
D804	B0EAKT000007	DIODE SI	Δ
D804	B0EAKT000027	DIODE SI	Δ
D804	EM02BMV1	DIODE SI	Δ
D805	B0AAKT000010	DIODE SI	Δ
D805	B0AAKT000009	DIODE SI	Δ
D805	B0EAKT000007	DIODE SI	Δ
D805	B0EAKT000027	DIODE SI	Δ
D805	EM02BMV1	DIODE SI	Δ
D806	B0AAKT000010	DIODE SI	Δ.
D806	B0AAKT000009	DIODE SI	<u> </u>
D806	B0EAKT000007	DIODE SI	Δ.
D806	B0EAKT000027	DIODE SI	<u> </u>
D806	EM02BMV1	DIODE SI	<u> </u>
D807	B0AAKT000010	DIODE SI	<u> </u>
D807	B0AAKT000009	DIODE SI	<u> </u>
D807	B0EAKT000007	DIODE SI	<u> </u>
D807	B0EAKT000027	DIODE SI	<u> </u>
D807	EM02BMV1	DIODE SI	<u> </u>
D851	B0JAMD000012	DIODE SI	\perp
D851	B0JAGE000001	DIODE SI	

Ref. No.	Part No.	Part Name & Description	Remarks
D851	1GWJ43TPA3	DIODE SI	
D852	B0HAJL000001	DIODE SI	
D852	B0HAGP000012	DIODE SI	
D853	B0HAHP000014	DIODE SI	
D853	B0HAJP000007	DIODE SI	
D853	B0HAMP000061	DIODE SI	
D854	B0HAJL000001	DIODE SI	
D854	B0HAGP000012	DIODE SI	
D855	B0HAJL000001	DIODE SI	
D855	B0HAGP000012	DIODE SI	
D856	B0HAJL000001	DIODE SI	
D856	B0HAGP000012	DIODE SI	
D858	B0EALR000005	DIODE SI	
D858	ERD28-06L22	DIODE SI	
D860	ERB84-009V1	DIODE SI	
D860	EK19V1	DIODE SI	

RESISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
R401	ERJ6GEYJ561V	MGF CHIP 1/10W 560 (A)	
R401	ERJ6GEYJ122V	MGF CHIP 1/10W 1.2K (B,C)	
R402	ERDS2TJ223	CARBON 1/4W 22K (A)	
R402	ERDS2TJ183T	CARBON 1/4W 18K (B,C)	
R405	ERG1SJ331H	METAL OXIDE 1W 330	
R409	ERJ6GEYJ333V	MGF CHIP 1/10W 33K (A)	
R409	ERJ6GEYJ223V	MGF CHIP 1/10W 22K (B,C)	
R410	ERDS2TJ392	CARBON 1/4W 3.9K (A)	
R410	ERDS2TJ223	CARBON 1/4W 22K (B,C)	
R411	ERJ6GEYJ823V	MGF CHIP 1/10W 82K (A)	
R411	ERJ6GEYJ223V	MGF CHIP 1/10W 22K (B,C)	
R413	ERJ6GEYJ273V	MGF CHIP 1/10W 27K	
R414	ERDS1FJ1R2P	CARBON 1/2W 1.2 (A)	Δ
R414	ERDS1FJ1R8P	CARBON 1/2W 1.8 (B,C)	Δ
R415	ERDS1FJ1R8P	CARBON 1/2W 1.8 (B,C)	Δ
R422	ERDS2TJ331	CARBON 1/4W 330	
R427	ERDS1FJ1R5P	CARBON 1/2W 1.5	Δ
R431	ERJ6GEYJ821V	MGF CHIP 1/10W 820	
R432	ERJ6GEYJ563V	MGF CHIP 1/10W 56K (A)	
R432	ERJ6GEYJ393V	MGF CHIP 1/10W 39K (B,C)	
R433	ERJ6GEYJ153V	MGF CHIP 1/10W 15K (A)	
R433	ERJ6GEYJ102V	MGF CHIP 1/10W 1K (B,C)	
R434	ERDS2TJ472	CARBON 1/4W 4.7K	
R435	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R436	ERJ6GEYJ104V	MGF CHIP 1/10W 100K	
R466	ERJ6GEYJ473V	MGF CHIP 1/10W 47K	
R468	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R470	ERDS1FJ152P	CARBON 1/2W 1.5K	Δ
R501	ERDS2TJ471	CARBON 1/4W 470	
R502	ERDS2TJ561	CARBON 1/4W 560	
R503	ER0S2TKF7501	PRECISION METAL FILM 1/4W 7.5K (A)	Δ
R503	ER0S2THF8661	PRECISION METAL FILM 1/4W 8.66K (B,C)	Δ

Ref. No.	Part No.	Part Name & Description	Remarks
R503	ER0S2TKF8661	PRECISION METAL FILM 1/4W 8.66K (B,C)	Δ
R508	ERDS1FJ1R0P	CARBON 1/2W 1	Δ
R509	ERJ6GEYJ101V	MGF CHIP 1/10W 100 (A)	
R511	ERG2SJ222H	METAL OXIDE 2W 2.2K	
R512	ERDS2TJ122	CARBON 1/4W 1.2K (A)	
R513	ERDS2TJ472	CARBON 1/4W 4.7K (A)	
R514	ERDS2TJ102	CARBON 1/4W 1K (B,C)	
R516	LAR05222J09	W FLMPRF 5W 2.2K	
R519	ERDS2TJ822	CARBON 1/4W 8.2K	
R524	ERDS2TJ103	CARBON 1/4W 10K	
R525	ERDS2TJ473	CARBON 1/4W 47K	
R526	ERX2SJR75H	METAL OXIDE 2W 0.75	Δ
R552	ERDS2TJ472	CARBON 1/4W 4.7K	
R553	ERDS2TJ102	CARBON 1/4W 1K	
R554	ERG2SJ102H	METAL OXIDE 2W 1K	
R555	ERDS2TJ683	CARBON 1/4W 68K (A)	
R555	ERDS2TJ563T	CARBON 1/4W 56K (B,C)	
R556	ERDS2TJ683	CARBON 1/4W 68K (A)	
R556	ERDS2TJ103	CARBON 1/4W 10K (B,C)	
R561	ERQ1CJP1R8S	FUSE 16V 1.8A (B,C)	Δ
R562	ERF5ZK2R2	W FLMPRF 5W 2.2	
R571	ERJ6GEYJ101V	MGF CHIP 1/10W 100	
R572	ERDS2TJ561	CARBON 1/4W 560	
R573	ERDS2TJ101	CARBON 1/4W 100	
R574	ERDS2TJ103	CARBON 1/4W 10K	
R585	ERDS2TJ473	CARBON 1/4W 47K (B,C)	
R586	ERDS2TJ182	CARBON 1/4W 1.8K	
R587	ERDS2TJ123	CARBON 1/4W 12K (B,C)	
R591	ERDS2TJ103	CARBON 1/4W 10K	
R592	ERDS2TJ472	CARBON 1/4W 4.7K	
R701	ERQ12AJ101P	FUSE 1/2W 100	Δ
R710	ERQ1CJP6R8S	FUSE 1W 6.8 (B,C)	Δ
R713	ERDS2TJ471	CARBON 1/4W 470 (B,C)	
R714	ERDS2TJ272	CARBON 1/4W 2.7K (B,C)	
R751	ERDS2TJ101	CARBON 1/4W 100 (B,C)	
R752	ERJ6GEYJ181V	MGF CHIP 1/10W 180 (B,C)	
R753	EVMAASA00B14	VARIABLE 10K (B,C)	
R755	ERDS2TJ101	CARBON 1/4W 100 (B,C)	
R756	ERDS2TJ152	CARBON 1/4W 1.5K (B,C)	
R757	ERJ6GEYJ752V	MGF CHIP 1/10W 7.5K (B,C)	
R758	ERJ6GEYJ823V	MGF CHIP 1/10W 82K (B,C)	
R759	ERJ6GEYJ683V	MGF CHIP 1/10W 68K	
R760	ERJ6GEYJ474V	MGF CHIP 1/10W 470K (B,C)	
R761	ERJ6GEYJ103V	MGF CHIP 1/10W 10K (B,C)	
R762	ERJ6GEYJ123V	MGF CHIP 1/10W 12K (B,C)	
R763	EVMAASA00B14	VARIABLE 10K (B,C)	
R764	ERJ6GEYJ682V	MGF CHIP 1/10W 6.8K (B,C)	
R765	ERJ6GEYJ182V	MGF CHIP 1/10W 1.8K (B,C)	
R766	EVMAASA00B14	VARIABLE 10K (B,C)	
R767	ERJ6GEYJ682V	MGF CHIP 1/10W 6.8K (B,C)	
R768	ERJ6GEYJ222V	MGF CHIP 1/10W 2.2K (B,C)	
R769	ERJ6GEYJ102V	MGF CHIP 1/10W 1K (B,C)	

R771 ERJGGEYJ332V MGF CHIP 1/10W 3.3K (B,C) R772 ERJGGEYJ82V MGF CHIP 1/10W 1.5K (B,C) R773 ERJGGEYJ822V MGF CHIP 1/10W 1.6K (B,C) R774 ERJGGEYJ822V MGF CHIP 1/10W 8.2K (B,C) R775 ERJGGEYJ822V MGF CHIP 1/10W 8.2K (B,C) R776 ERJGGEYJ472V MGF CHIP 1/10W 1.5K (B,C) R777 ERJGGEYJ154V MGF CHIP 1/10W 1.5K (B,C) R779 ERJGGEYJ124V MGF CHIP 1/10W 1.5K (B,C) R789 ERJGGEYJ124V MGF CHIP 1/10W 1.0K (B,C) R791 ERJGGEYJ124V MGF CHIP 1/10W 1.0K (B,C) R792 ERJGGEYJ822V MGF CHIP 1/10W 8.2K (B,C) R793 ERJGGEYJ822V MGF CHIP 1/10W 8.2K (B,C) R794 ERJGGEYJ822V MGF CHIP 1/10W 3.3K (B,C) R795 ERJGGEYJ332V MGF CHIP 1/10W 3.5K (B,C) R796 ERJGGEYJ152V MGF CHIP 1/10W 1.5K (B,C) R797 ERJGGEYJ154V MGF CHIP 1/10W 1.5K (B,C) R798 ERJGGEYJ154V MGF CHIP 1/10W 1.5K (B,C) R799 ERJGGEYJ154V MGF CHIP 1/10W 1.5K (B,C) R790 ERJGGEYJ154V MGF CHIP 1/10W 1.5K (B,C) R791 ERJGGEYJ154V MGF CHIP 1/10W 1.5K (B,C) R792 ERJGGEYJ154V MGF CHIP 1/10W 1.0K (B,C) R793 ERJGGEYJ154V MGF CHIP 1/10W 1.0K (B,C) R794 ERJGGEYJ154V MGF CHIP 1/10W 1.0K (B,C) R796 ERJGGEYJ154V MGF CHIP 1/10W 1.0K (B,C) R797 ERJGGEYJ154V MGF CHIP 1/10W 1.0K (B,C) R798 ERJGGEYJ154V MGF CHIP 1/10W 1.0K (B,C) R799 ERJGGEYJ154V MGF CHIP 1/10W 1.0K (B,C) R801 VRESC2TK825T CARBON 1/2W 8.2M ♠ R802 ERDS2TJ472 CARBON 1/4W 4.7K (B,C) R803 ERDS2TJ103 CARBON 1/4W 4.7K R804 ERF5ZKR82 W FLMPRF 5W 0.82 ♠ R855 ERJGGEYJ333H METAL OXIDE 2W 27K R856 ERJS2TJ683 CARBON 1/4W 68K R857 ERG2SJ333H METAL OXIDE 2W 33K R859 ERJGGEYJ332V MGF CHIP 1/10W 3.3K R859 ERJGGEYJ322V MGF CHIP 1/10W 1.5K R860 D0AF150JA038 CARBON 1/4W 15K (A) R861 ERJSGTJ123 CARBON 1/4W 47K (B,C) R862 ERDS2TJ123 CARBON 1/4W 47K (B,C) R866 ERDS2TJ123 CARBON 1/4W 47K (B,C) R866 ERDS2TJ123 CARBON 1/4W 47K (B,C) R866 ERDS2TJ133 CARBON 1/4W 47K (B,C)	Ref. No.	Part No.	Part Name & Description	Remarks
R773 ERJ6GEYJ823V MGF CHIP 1/10W 82K (B,C) R774 ERJ6GEYJ102V MGF CHIP 1/10W 1K (B,C) R775 ERJ6GEYJ472V MGF CHIP 1/10W 1K (B,C) R776 ERJ6GEYJ472V MGF CHIP 1/10W 4.7K (B,C) R777 ERJ6GEYJ154V MGF CHIP 1/10W 150K (B,C) R779 ERJ6GEYJ124V MGF CHIP 1/10W 120K (B,C) R789 ERJ6GEYJ124V MGF CHIP 1/10W 100 R791 ERJ6GEYJ822V MGF CHIP 1/10W 8.2K (B,C) R792 ERJ6GEYJ382V MGF CHIP 1/10W 8.2K (B,C) R793 ERJ6GEYJ382V MGF CHIP 1/10W 3.3K (B,C) R794 ERJ6GEYJ332V MGF CHIP 1/10W 3.5K (B,C) R795 ERJ6GEYJ393V MGF CHIP 1/10W 39K (B,C) R796 ERJ6GEYJ154V MGF CHIP 1/10W 150K (B,C) R797 ERJ6GEYJ154V MGF CHIP 1/10W 150K (B,C) R798 ERJ6GEYJ101V MGF CHIP 1/10W 100 (B,C) R799 ERJ6GEYJ472V MGF CHIP 1/10W 4.7K (B,C) R801 VRESC2TK825T CARBON 1/2W 8.2M ⚠ R802 ERDS2TJ472 CARBON 1/4W 4.7K R803 ERDS2TJ103 CARBON 1/4W 10K R804 ERF5ZKR82 W FLMPRF 5W 0.82 ⚠ R850 ERG2SJ273H METAL OXIDE 2W 27K R851 ERDS2TJ683 CARBON 1/4W 68K R852 ERDS2TJ683 CARBON 1/4W 68K R854 ERD2FCG681V FUSE 1/4W 680 ⚠ R855 ERJ6GEYJ332V MGF CHIP 1/10W 3.3K R856 ERX2SZJR10P METAL FILM 2W 0.1 R857 ERG2SJ333H METAL OXIDE 2W 33K R859 ERJ6GEYJ152V MGF CHIP 1/10W 3.3K R860 D0AF150JA038 CARBON 1/4W 15K R860 D0AF150JA038 CARBON 1/4W 15K R861 ERDS2TJ123 CARBON 1/4W 15K (B,C) R862 ERDS2TJ13 CARBON 1/4W 15K (B,C) R866 ERDS2TJ13 CARBON 1/4W 15K (B,C)	R771	ERJ6GEYJ332V	MGF CHIP 1/10W 3.3K (B,C)	
R774 ERJ6GEYJ102V MGF CHIP 1/10W 1K (B,C) R775 ERJ6GEYJ822V MGF CHIP 1/10W 8.2K (B,C) R776 ERJ6GEYJ154V MGF CHIP 1/10W 1.7K (B,C) R777 ERJ6GEYJ154V MGF CHIP 1/10W 1.50K (B,C) R779 ERJ6GEYJ124V MGF CHIP 1/10W 1.20K (B,C) R789 ERJ6GEYJ124V MGF CHIP 1/10W 1.20K (B,C) R791 ERJ6GEYJ822V MGF CHIP 1/10W 8.2K (B,C) R792 ERJ6GEYJ822V MGF CHIP 1/10W 8.2K (B,C) R793 ERJ6GEYJ332V MGF CHIP 1/10W 3.3K (B,C) R794 ERJ6GEYJ332V MGF CHIP 1/10W 3.5K (B,C) R795 ERJ6GEYJ393V MGF CHIP 1/10W 39K (B,C) R796 ERJ6GEYJ154V MGF CHIP 1/10W 150K (B,C) R797 ERJ6GEYJ154V MGF CHIP 1/10W 150K (B,C) R798 ERJ6GEYJ154V MGF CHIP 1/10W 150K (B,C) R799 ERJ6GEYJ154V MGF CHIP 1/10W 1.5K (B,C) R801 VRESC2TK625T CARBON 1/2W 8.2M ⚠ R802 ERDS2TJ472 CARBON 1/2W 8.2M ⚠ R804 ERF5ZKR82 W FLMPRF 5W 0.82 ⚠ R850 ERG2SJ273H METAL OXIDE 2W 27K R851 ERDS2TJ683 CARBON 1/4W 68K R852 ERDS2TJ683 CARBON 1/4W 68K R854 ERD2FCG681V FUSE 1/4W 680 ⚠ R855 ERJ6GEYJ332V MGF CHIP 1/10W 3.3K R856 ERX2SZJR10P METAL FILM 2W 0.1 R857 ERG2SJ333H METAL OXIDE 2W 33K R859 ERJ6GEYJ152V MGF CHIP 1/10W 3.3K R860 D0AF150JA038 CARBON 1/4W 15K R861 ERDS2TJ123 CARBON 1/4W 15K R862 ERDS2TJ123 CARBON 1/4W 15K (B,C) R866 ERDS2TJ123 CARBON 1/4W 15K (B,C) R866 ERDS2TJ123 CARBON 1/4W 15K (B,C)	R772	ERJ6GEYJ152V	MGF CHIP 1/10W 1.5K (B,C)	
R775 ERJ6GEYJ822V MGF CHIP 1/10W 8.2K (B,C) R776 ERJ6GEYJ472V MGF CHIP 1/10W 4.7K (B,C) R777 ERJ6GEYJ154V MGF CHIP 1/10W 150K (B,C) R779 ERJ6GEYJ124V MGF CHIP 1/10W 120K (B,C) R789 ERJ6GEYJ101V MGF CHIP 1/10W 100 R791 ERJ6GEYJ822V MGF CHIP 1/10W 8.2K (B,C) R792 ERJ6GEYJ822V MGF CHIP 1/10W 8.2K (B,C) R793 ERJ6GEYJ332V MGF CHIP 1/10W 3.3K (B,C) R794 ERJ6GEYJ332V MGF CHIP 1/10W 3.3K (B,C) R795 ERJ6GEYJ333V MGF CHIP 1/10W 3.5K (B,C) R796 ERJ6GEYJ393V MGF CHIP 1/10W 3.5K (B,C) R797 ERJ6GEYJ154V MGF CHIP 1/10W 150K (B,C) R798 ERJ6GEYJ154V MGF CHIP 1/10W 150K (B,C) R799 ERJ6GEYJ154V MGF CHIP 1/10W 100 (B,C) R799 ERJ6GEYJ171V MGF CHIP 1/10W 100 (B,C) R800 VRESC2TK825T CARBON 1/2W 8.2M ♠ R801 VRESC2TK825T CARBON 1/4W 4.7K R803 ERDS2TJ103 CARBON 1/4W 10K R804 ERF5ZKR82 WFLMPRF 5W 0.82 ♠ R850 ERG2SJ273H METAL OXIDE 2W 27K R851 ERDS2TJ683 CARBON 1/4W 68K R852 ERDS2TJ683 CARBON 1/4W 68K R854 ERD2FCG681V FUSE 1/4W 680 ♠ R855 ERJ6GEYJ332V MGF CHIP 1/10W 3.3K R866 ERX2SZJR10P METAL FILM 2W 0.1 R867 ERG2SJ333H METAL OXIDE 2W 33K R859 ERJ6GEYJ152V MGF CHIP 1/10W 1.5K R860 D0AF150JA038 CARBON 1/2W 15 R861 ERJ6GEYJ152V MGF CHIP 1/10W 1.5K R862 ERDS2TJ123 CARBON 1/4W 12K (A) R863 ERDS2TJ123 CARBON 1/4W 12K (A) R864 ERDS2TJ123 CARBON 1/4W 47K (B,C)	R773	ERJ6GEYJ823V	MGF CHIP 1/10W 82K (B,C)	
R776 ERJ6GEYJ472V MGF CHIP 1/10W 4.7K (B,C) R777 ERJ6GEYJ154V MGF CHIP 1/10W 150K (B,C) R779 ERJ6GEYJ124V MGF CHIP 1/10W 120K (B,C) R789 ERJ6GEYJ101V MGF CHIP 1/10W 100 R791 ERJ6GEYJ822V MGF CHIP 1/10W 8.2K (B,C) R792 ERJ6GEYJ822V MGF CHIP 1/10W 8.2K (B,C) R793 ERJ6GEYJ332V MGF CHIP 1/10W 3.3K (B,C) R794 ERJ6GEYJ152V MGF CHIP 1/10W 3.5K (B,C) R795 ERJ6GEYJ393V MGF CHIP 1/10W 39K (B,C) R796 ERJ6GEYJ154V MGF CHIP 1/10W 150K (B,C) R797 ERJ6GEYJ154V MGF CHIP 1/10W 150K (B,C) R798 ERJ6GEYJ154V MGF CHIP 1/10W 100 (B,C) R799 ERJ6GEYJ174V MGF CHIP 1/10W 4.7K (B,C) R801 VRESC2TK825T CARBON 1/2W 8.2M ▲ R802 ERDS2TJ472 CARBON 1/2W 8.2M ▲ R804 ERF5ZKR82 W FLMPRF 5W 0.82 ♣ R850 ERG2SJ273H METAL OXIDE 2W 27K R851 ERDS2TJ683 CARBON 1/4W 68K R852 ERDS2TJ683 CARBON 1/4W 68K R854 ERD2FCG681V FUSE 1/4W 680 ♣ R855 ERJ6GEYJ332V MGF CHIP 1/10W 3.3K R856 ERX2SZJR10P METAL FILM 2W 0.1 R857 ERG2SJ333H METAL OXIDE 2W 33K R859 ERJ6GEYJ152V MGF CHIP 1/10W 1.5K R860 D0AF150JA038 CARBON 1/2W 15 R861 ERJ6GEYJ122V MGF CHIP 1/10W 1.5K R862 ERDS2TJ123 CARBON 1/4W 12K (A) R866 ERDS2TJ123 CARBON 1/4W 12K (A) R866 ERDS2TJ123 CARBON 1/4W 47K (B,C) R866 ERDS2TJ123 CARBON 1/4W 12K (A) R866 ERDS2TJ123 CARBON 1/4W 47K (B,C)	R774	ERJ6GEYJ102V	MGF CHIP 1/10W 1K (B,C)	
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R799 ERJ6GEYJ472V MGF CHIP 1/10W 4.7K (B,C) R801 VRESC2TK825T CARBON 1/2W 8.2M A A R802 ERDS2TJ472 CARBON 1/4W 4.7K R803 ERDS2TJ103 CARBON 1/4W 10K R804 ERF5ZKR82 W FLMPRF 5W 0.82 R850 ERG2SJ273H METAL OXIDE 2W 27K R851 ERDS2TJ683 CARBON 1/4W 68K R852 ERDS2TJ683 CARBON 1/4W 68K R854 ERD2FCG681V FUSE 1/4W 680 R855 ERJ6GEYJ332V MGF CHIP 1/10W 3.3K R856 ERX2SZJR10P METAL FILM 2W 0.1 R857 ERG2SJ333H METAL OXIDE 2W 33K R859 ERJ6GEYJ152V MGF CHIP 1/10W 1.5K R860 D0AF150JA038 CARBON 1/2W 15 R861 ERJ6GEYJ222V MGF CHIP 1/10W 2.2K R862 ERDS2TJ123 CARBON 1/4W 47K (B,C) R862 ERDS2TJ473 CARBON 1/4W 47K (B,C) R866 ERDS2TJ473 CARBON 1/4W 47K (B,C)	R797	ERJ6GEYJ154V	MGF CHIP 1/10W 150K (B,C)	
R801 VRESC2TK825T CARBON 1/2W 8.2M R802 ERDS2TJ472 CARBON 1/4W 4.7K R803 ERDS2TJ103 CARBON 1/4W 10K R804 ERF5ZKR82 W FLMPRF 5W 0.82 R850 ERG2SJ273H METAL OXIDE 2W 27K R851 ERDS2TJ683 CARBON 1/4W 68K R852 ERDS2TJ683 CARBON 1/4W 68K R854 ERD2FCG681V FUSE 1/4W 680 R855 ERJ6GEYJ332V MGF CHIP 1/10W 3.3K R856 ERX2SZJR10P METAL FILM 2W 0.1 R857 ERG2SJ333H METAL OXIDE 2W 33K R859 ERJ6GEYJ152V MGF CHIP 1/10W 1.5K R860 D0AF150JA038 CARBON 1/2W 15 R861 ERJ6GEYJ222V MGF CHIP 1/10W 2.2K R862 ERDS2TJ123 CARBON 1/4W 47K (B,C) R862 ERDS2TJ473 CARBON 1/4W 47K (B,C) R866 ERDS2TJ473 CARBON 1/4W 47K (B,C)	R798	ERJ6GEYJ101V	MGF CHIP 1/10W 100 (B,C)	
R802 ERDS2TJ472 CARBON 1/4W 4.7K R803 ERDS2TJ103 CARBON 1/4W 10K R804 ERF5ZKR82 W FLMPRF 5W 0.82 R850 ERG2SJ273H METAL OXIDE 2W 27K R851 ERDS2TJ683 CARBON 1/4W 68K R852 ERDS2TJ683 CARBON 1/4W 68K R854 ERD2FCG681V FUSE 1/4W 680 R855 ERJ6GEYJ332V MGF CHIP 1/10W 3.3K R856 ERX2SZJR10P METAL FILM 2W 0.1 R857 ERG2SJ333H METAL OXIDE 2W 33K R859 ERJ6GEYJ152V MGF CHIP 1/10W 1.5K R860 D0AF150JA038 CARBON 1/2W 15 R861 ERJ6GEYJ222V MGF CHIP 1/10W 2.2K R862 ERDS2TJ123 CARBON 1/4W 12K (A) R866 ERDS2TJ473 CARBON 1/4W 47K (B,C) R866 ERDS2TJ473 CARBON 1/4W 47K (B,C)	R799	ERJ6GEYJ472V	MGF CHIP 1/10W 4.7K (B,C)	
R803 ERDS2TJ103 CARBON 1/4W 10K R804 ERF5ZKR82 W FLMPRF 5W 0.82 ⚠ R850 ERG2SJ273H METAL OXIDE 2W 27K R851 ERDS2TJ683 CARBON 1/4W 68K R852 ERDS2TJ683 CARBON 1/4W 68K R854 ERD2FCG681V FUSE 1/4W 680 ⚠ R855 ERJ6GEYJ332V MGF CHIP 1/10W 3.3K R856 ERX2SZJR10P METAL FILM 2W 0.1 R857 ERG2SJ333H METAL OXIDE 2W 33K R859 ERJ6GEYJ152V MGF CHIP 1/10W 1.5K R860 D0AF150JA038 CARBON 1/2W 15 R861 ERJ6GEYJ222V MGF CHIP 1/10W 2.2K R862 ERDS2TJ123 CARBON 1/4W 12K (A) R866 ERDS2TJ473 CARBON 1/4W 47K (B,C) R866 ERDS2TJ473 CARBON 1/4W 47K (B,C)	R801	VRESC2TK825T	CARBON 1/2W 8.2M	Δ
R804 ERF5ZKR82 W FLMPRF 5W 0.82 R850 ERG2SJ273H METAL OXIDE 2W 27K R851 ERDS2TJ683 CARBON 1/4W 68K R852 ERDS2TJ683 CARBON 1/4W 68K R854 ERD2FCG681V FUSE 1/4W 680 R855 ERJ6GEYJ332V MGF CHIP 1/10W 3.3K R856 ERX2SZJR10P METAL FILM 2W 0.1 R857 ERG2SJ333H METAL OXIDE 2W 33K R859 ERJ6GEYJ152V MGF CHIP 1/10W 1.5K R860 D0AF150JA038 CARBON 1/2W 15 R861 ERJ6GEYJ222V MGF CHIP 1/10W 2.2K R862 ERDS2TJ123 CARBON 1/4W 12K (A) R866 ERDS2TJ473 CARBON 1/4W 47K (B,C) R866 ERDS2TJ473 CARBON 1/4W 47K (B,C)	R802	ERDS2TJ472	CARBON 1/4W 4.7K	
R850 ERG2SJ273H METAL OXIDE 2W 27K R851 ERDS2TJ683 CARBON 1/4W 68K R852 ERDS2TJ683 CARBON 1/4W 68K R854 ERD2FCG681V FUSE 1/4W 680 R855 ERJ6GEYJ332V MGF CHIP 1/10W 3.3K R856 ERX2SZJR10P METAL FILM 2W 0.1 R857 ERG2SJ333H METAL OXIDE 2W 33K R859 ERJ6GEYJ152V MGF CHIP 1/10W 1.5K R860 D0AF150JA038 CARBON 1/2W 15 R861 ERJ6GEYJ222V MGF CHIP 1/10W 2.2K R862 ERDS2TJ123 CARBON 1/4W 12K (A) R866 ERDS2TJ473 CARBON 1/4W 47K (B,C) R866 ERDS2TJ473 CARBON 1/4W 47K (B,C)	R803	ERDS2TJ103	CARBON 1/4W 10K	
R851 ERDS2TJ683 CARBON 1/4W 68K R852 ERDS2TJ683 CARBON 1/4W 68K R854 ERD2FCG681V FUSE 1/4W 680 R855 ERJ6GEYJ332V MGF CHIP 1/10W 3.3K R856 ERX2SZJR10P METAL FILM 2W 0.1 R857 ERG2SJ333H METAL OXIDE 2W 33K R859 ERJ6GEYJ152V MGF CHIP 1/10W 1.5K R860 D0AF150JA038 CARBON 1/2W 15 R861 ERJ6GEYJ222V MGF CHIP 1/10W 2.2K R862 ERDS2TJ123 CARBON 1/4W 12K (A) R862 ERDS2TJ473 CARBON 1/4W 47K (B,C) R866 ERDS2TJ473 CARBON 1/4W 47K (B,C)	R804	ERF5ZKR82	W FLMPRF 5W 0.82	Δ
R852 ERDS2TJ683 CARBON 1/4W 68K R854 ERD2FCG681V FUSE 1/4W 680 R855 ERJ6GEYJ332V MGF CHIP 1/10W 3.3K R856 ERX2SZJR10P METAL FILM 2W 0.1 R857 ERG2SJ333H METAL OXIDE 2W 33K R859 ERJ6GEYJ152V MGF CHIP 1/10W 1.5K R860 D0AF150JA038 CARBON 1/2W 15 R861 ERJ6GEYJ222V MGF CHIP 1/10W 2.2K R862 ERDS2TJ123 CARBON 1/4W 12K (A) R864 ERDS2TJ473 CARBON 1/4W 47K (B,C) R866 ERDS2TJ473 CARBON 1/4W 47K (B,C)	R850	ERG2SJ273H	METAL OXIDE 2W 27K	
R854 ERD2FCG681V FUSE 1/4W 680 R855 ERJ6GEYJ332V MGF CHIP 1/10W 3.3K R856 ERX2SZJR10P METAL FILM 2W 0.1 R857 ERG2SJ333H METAL OXIDE 2W 33K R859 ERJ6GEYJ152V MGF CHIP 1/10W 1.5K R860 D0AF150JA038 CARBON 1/2W 15 R861 ERJ6GEYJ222V MGF CHIP 1/10W 2.2K R862 ERDS2TJ123 CARBON 1/4W 12K (A) R862 ERDS2TJ473 CARBON 1/4W 47K (B,C) R866 ERDS2TJ473 CARBON 1/4W 47K (B,C)	R851	ERDS2TJ683	CARBON 1/4W 68K	
R855 ERJ6GEYJ332V MGF CHIP 1/10W 3.3K R856 ERX2SZJR10P METAL FILM 2W 0.1 R857 ERG2SJ333H METAL OXIDE 2W 33K R859 ERJ6GEYJ152V MGF CHIP 1/10W 1.5K R860 D0AF150JA038 CARBON 1/2W 15 R861 ERJ6GEYJ222V MGF CHIP 1/10W 2.2K R862 ERDS2TJ123 CARBON 1/4W 12K (A) R862 ERDS2TJ473 CARBON 1/4W 47K (B,C) R866 ERDS2TJ473 CARBON 1/4W 47K (B,C)	R852	ERDS2TJ683	CARBON 1/4W 68K	
R856 ERX2SZJR10P METAL FILM 2W 0.1 R857 ERG2SJ333H METAL OXIDE 2W 33K R859 ERJ6GEYJ152V MGF CHIP 1/10W 1.5K R860 D0AF150JA038 CARBON 1/2W 15 R861 ERJ6GEYJ222V MGF CHIP 1/10W 2.2K R862 ERDS2TJ123 CARBON 1/4W 12K (A) R862 ERDS2TJ473 CARBON 1/4W 47K (B,C) R866 ERDS2TJ473 CARBON 1/4W 47K (B,C)	R854	ERD2FCG681V	FUSE 1/4W 680	Δ
R857 ERG2SJ333H METAL OXIDE 2W 33K R859 ERJ6GEYJ152V MGF CHIP 1/10W 1.5K R860 D0AF150JA038 CARBON 1/2W 15 R861 ERJ6GEYJ222V MGF CHIP 1/10W 2.2K R862 ERDS2TJ123 CARBON 1/4W 12K (A) R862 ERDS2TJ473 CARBON 1/4W 47K (B,C) R866 ERDS2TJ473 CARBON 1/4W 47K (B,C) R866 ERDS2TJ473 CARBON 1/4W 47K (B,C)	R855	ERJ6GEYJ332V	MGF CHIP 1/10W 3.3K	
R859 ERJ6GEYJ152V MGF CHIP 1/10W 1.5K R860 D0AF150JA038 CARBON 1/2W 15 R861 ERJ6GEYJ222V MGF CHIP 1/10W 2.2K R862 ERDS2TJ123 CARBON 1/4W 12K (A) R862 ERDS2TJ473 CARBON 1/4W 47K (B,C) R866 ERDS2TJ473 CARBON 1/4W 47K (B,C)	R856	ERX2SZJR10P	METAL FILM 2W 0.1	
R860 D0AF150JA038 CARBON 1/2W 15 R861 ERJ6GEYJ222V MGF CHIP 1/10W 2.2K R862 ERDS2TJ123 CARBON 1/4W 12K (A) R862 ERDS2TJ473 CARBON 1/4W 47K (B,C) R866 ERDS2TJ473 CARBON 1/4W 47K (B,C)	R857	ERG2SJ333H	METAL OXIDE 2W 33K	
R861 ERJ6GEYJ222V MGF CHIP 1/10W 2.2K R862 ERDS2TJ123 CARBON 1/4W 12K (A) R862 ERDS2TJ473 CARBON 1/4W 47K (B,C) R866 ERDS2TJ123 CARBON 1/4W 12K (A) R866 ERDS2TJ473 CARBON 1/4W 47K (B,C)	R859	ERJ6GEYJ152V	MGF CHIP 1/10W 1.5K	
R862 ERDS2TJ123 CARBON 1/4W 12K (A) R862 ERDS2TJ473 CARBON 1/4W 47K (B,C) R866 ERDS2TJ123 CARBON 1/4W 12K (A) R866 ERDS2TJ473 CARBON 1/4W 47K (B,C)	R860	D0AF150JA038	CARBON 1/2W 15	
R862 ERDS2TJ473 CARBON 1/4W 47K (B,C) R866 ERDS2TJ123 CARBON 1/4W 12K (A) R866 ERDS2TJ473 CARBON 1/4W 47K (B,C)	R861	ERJ6GEYJ222V	MGF CHIP 1/10W 2.2K	
R866 ERDS2TJ123 CARBON 1/4W 12K (A) R866 ERDS2TJ473 CARBON 1/4W 47K (B,C)	R862	ERDS2TJ123	CARBON 1/4W 12K (A)	
R866 ERDS2TJ473 CARBON 1/4W 47K (B,C)	R862	ERDS2TJ473	CARBON 1/4W 47K (B,C)	
	R866	ERDS2TJ123	CARBON 1/4W 12K (A)	
R867 ERDS2TJ103 CARBON 1/4W 10K	R866	ERDS2TJ473	CARBON 1/4W 47K (B,C)	
	R867	ERDS2TJ103	CARBON 1/4W 10K	

CAPACITORS

Ref. No.	Part No.	Part Name & Description	Remarks
C401	ECA1HM2R2B	ELECTROLYTIC 50V 2.2UF (A)	
C401	ECEA1HKAR33B	ELECTROLYTIC 50V 0.33UF (B,C)	
C402	ECA1CM471B	ELECTROLYTIC 16V 470UF	
C408	ECEA1HGE010B	ELECTROLYTIC 50V 1UF	
C409	ECA1VM221B	ELECTROLYTIC 35V 220UF	
C413	ECQB1H104KF	POLYESTER 50V 0.1UF (A)	
C413	ECQB1104JF3	POLYESTER 200V 0.10UF (B,C)	
C414	ECA1VM102B	ELECTROLYTIC 35V 1000UF	
C418	ECA1VM221B	ELECTROLYTIC 35V 220UF	
C458	ECQB1H103KF3	POLYESTER 50V 0.01UF	
C459	ECA1VM102B	ELECTROLYTIC 35V 1000UF (B,C)	
C460	ECA1HM010B	ELECTROLYTIC 50V 1UF (B,C)	
C510	ECKR2H681KB5	CERAMIC 500V 680PF	
C513	ECA1HM100B	ELECTROLYTIC 50V 10UF	
C521	ECA1HM100B	ELECTROLYTIC 50V 10UF	
C523	ECA1CM101B	ELECTROLYTIC 16V 100UF	
C524	ECKR3D222KBP	CERAMIC 2KV 2200PF (B,C)	Δ
C525	ECKR3D152KBP	CERAMIC 2KV 1500PF (B,C)	Δ
C526	ECQB1H473KF3	POLYESTER 50V 0.047UF (B,C)	1
C552	ECWH16822JVB	POLYESTER 1250V 0.082UF (A)	
C552	ECWH16123JVB	POLYESTER 1250V 0.002UF (B,C)	
C554	ECQF4393JZH	CERAMIC 400V 0.039UF (B,C)	
C555	ECWH16392JVB	POLYESTER 1600V 3900PF (A)	A
			Δ
C555	ECWH12H392JS	POLYESTER 1250V 3900PF (A)	Δ
C555	ECWH20222JVB	POLYESTER 1250V 2200PF (B,C)	Δ
C556	ECWF2304JSB	POLYESTER 250V 0.3UF (A)	
C556	ECWF2754JSB	POLYESTER 250V 0.75UF (B,C)	
C557	ECWF2334JSB	POLYESTER 500V 0.33UF (B,C)	
C558	ECA1VM331B	ELECTROLYTIC 35V 330UF	
C559	ECWF2474JSB	POLYESTER 250V 0.47UF (B,C)	
C560	ECA2EM100B	ELECTROLYTIC 250V 10UF	Δ
C561	ECA1HM4R7B	ELECTROLYTIC 50V 4.7UF	
C562	ECA1HM2R2B	ELECTROLYTIC 50V 2.2UF (B,C)	
C563	ECKR2H681KB5	CERAMIC 500V 680PF	
C572	ECA1CM470B	ELECTROLYTIC 16V 47UF	
C575	ECA160V33UE	ELECTROLYTIC 160V 33UF	
C576	ECKW3D221KBP	CERAMIC 2KV 220PF (A)	Δ
C576	ECKW3D102KBP	CERAMIC 2KV 1000PF (B,C)	Δ
C703	ECQE1685KFB	POLYESTER 100V 0.68UF (B,C)	
C704	ECQE2474KFB	POLYESTER 250V 0.47	
C761	ECJ2VF1H103Z	C CHIP 50V 0.01UF (B,C)	
C762	ECA1CM100B	ELECTROLYTIC 16V 10UF (B,C)	
C763	VCUSTBC224KB	C CHIP 16V 0.22UF (B,C)	
C764	ECJ2VB1H102K	C CHIP 50V 1000PF (B,C)	
C765	ECEA1HKAR33B	ELECTROLYTIC 50V 0.33UF (B,C)	
	ECJ2VB1H103K	C CHIP 50V 0.01UF (B,C)	
C768	i e		1
C768 C792	ECJ2VB1E104K	C CHIP 25V 0.1UF (B,C)	
	ECJ2VB1E104K ECJ2VB1E104K	C CHIP 25V 0.1UF (B,C) C CHIP 25V 0.1UF (B,C)	
C792		C CHIP 25V 0.1UF (B,C)	
C792 C793	ECJ2VB1E104K		

Ref. No.	Part No.	Part Name & Description	Remarks
C802	J0LE00000023	ARRESTER	Δ
C803	ECKATS103MF	CERAMIC 250V 0.01UF	Δ
C803	ECKETS103MF	CERAMIC 125V 0.01UF	Δ
C803	VCKST3G103MY	CERAMIC 250V 0.01UF	Δ
C803	VCKSU3D103MY	CERAMIC 125V 0.01UF	Δ
C806	VCKSRNG472ZX	CERAMIC 250V 4700PF	
C807	VCKSRNG472ZX	CERAMIC 250V 4700PF	
C808	VCKSRNG472ZX	CERAMIC 250V 4700PF	
C809	VCKSRNG472ZX	CERAMIC 250V 4700PF	
C850	ECA1HHG470B	ELECTROLYTIC 50V 47UF	
C851	ECKR1H102KB	CERAMIC 50V 0.001UF	
C852	ECKR1H471KB5	CERAMIC 50V 470PF	
C853	VCESAS2D561E	ELECTROLYTIC 200V 560UF (A)	Δ
C853	ECEC2DP561BB	ELECTROLYTIC 200V 560UF (A)	Δ
C853	VCESAY2D561E	ELECTROLYTIC 200V 560UF (A)	Δ
C853	ECEC2DP821CB	ELECTROLYTIC 200V 820UF (B,C)	Δ
C853	EC0S2DP821CB	ELECTROLYTIC 200V 820UF (B,C)	Δ
C854	ECKR2H221KB5	CERAMIC 500V 220PF	
C855	ECA2DHG4R7B	ELECTROLYTIC 200V 4.7UF	
C856	F1B3D222A010	CERAMIC 25V 2200PF	
C857	ECJ2VB1H122K	C CHIP 50V 1200PF	
C858	ECJ2VB1E223K	C CHIP 25V 0.022UF	
C861	F1B3A102A009	CERAMIC 25V 1000PF	
C862	ECKATS152ME	CERAMIC 250V 1500PF	Δ
C862	ECKETS152ME	CERAMIC 250V 1500PF	Δ
C862	VCKST4D152MX	CERAMIC 250V 1500PF	Δ
C862	VCKST5D152MX	CERAMIC 250V 1500PF	Δ
C862	VCKSU4D152MX	CERAMIC 250V 1500PF	Δ
C862	VCKSU5D152MX	CERAMIC 250V 1500PF	Δ
C867	EEUFD1V331LB	ELECTROLYTIC 35V 330UF	
C868	ECEC2DP471BB	ELECTROLYTIC 200V 470UF	Δ
C872	EEUFD1V331LB	ELECTROLYTIC 35V 330UF	
C873	ECA1VM331B	ELECTROLYTIC 35V 330UF	

COILS

Ref. No.	Part No.	Part Name & Description	Remarks
L551	ELH5L6141	COIL (B,C)	Δ
L552	J0JKA0000015	COIL	
L554	G0D700000001	COIL (A)	Δ
L554	ELH5L8106	COIL (B,C)	Δ
L701	LSLQC15D821K	COIL 820UH (B,C)	
L703	LSLQC15D821K	COIL 820UH (B,C)	
L704	LSLQA10R682J	COIL 6800UH	
L801	ELF21V025A	LINE FILTER	Δ
L801	J0HBLH000001	LINE FILTER	Δ
L802	ELF21V025A	LINE FILTER	Δ
L802	J0HBLH000001	LINE FILTER	Δ
L851	J0JKA0000015	COIL	
L852	J0JHB0000021	FILTER	
L853	J0JKA0000015	COIL	
L855	J0JHB0000021	FILTER	
L858	VLQSAB7D220K	COIL 22UH	
L860	VLQSAB7D220K	COIL 22UH	

PIN HEADERS

Ref. No.	Part No.	Part Name & Description	Remarks
P501	VJPS0772	CONNECTOR PLUG 19P	
P503	K1KA06A00112	CONNECTOR 6P (B,C)	
P504	K1MP04A00007	4P WIRE TRAP (A)	
P801	LSJP0814	CONNECTOR 2P	
P802	VEKS5825	CONNECTOR CABLE W/PLUG,0V	
P850	K1KA02A00009	PIN HEADER 2P	

FUSE & PROTECTOR

Ref. No.	Part No.	Part Name & Description	Remarks
F801	K5D632AQ0002	FUSE 125V 6.3A	Δ
F801	K5D632ADA001	FUSE 125V 6.3A	Δ
F801	XBA1C63NU100	FUSE 125V 6.3A	Δ
PR850	UNH000600A	IC PROTECTOR 1.5A	Δ
PR850	B1ZAZ0000040	IC PROTECTOR 1.5A	Δ
PR850	LSSF009A25E	IC PROTECTOR 1.5A	Δ

RELAY

Ref. No.	Part No.	Part Name & Description	Remarks
RL591	LSSY0004	RELAY	Δ
RL591	K6B1AGA00042	RELAY,120V	Δ
RL591	TSEH0013	RELAY	Δ
RL591	TSEH1860-1	RELAY	Δ
RL591	TSEH8007	RELAY,120V	Δ
RL801	LSSY0004	RELAY	Δ
RL801	K6B1AGA00042	RELAY,120V	Δ
RL801	TSEH0013	RELAY	Δ
RL801	TSEH1860-1	RELAY	Δ
RL801	TSEH8007	RELAY,120V	Δ

TRANSFORMER

Ref. No.	Part No.	Part Name & Description	Remarks
T501	ETH09K8AZ	TRANSFORMER (A)	
T501	ETH19Y70AY	TRANSFORMER (B,C)	
T551	KFT3AA342F	FLYBACK TRANSFORMER (A)	Δ
T551	KFT4AA413F	FLYBACK TRANSFORMER (B,C)	Δ
T850	ETS39AG2N5NC	TRANSFORMER (A)	Δ
T850	ETS39AG2P5NC	TRANSFORMER (B,C)	Δ

MISCELLANEOUS

Ref. No.	Part No.	Part Name & Description	Remarks
154	TMM5439-1	CLAMPER	
272	TMM77412	CLAMPER	
483	XYN3+F10S	SCREW W/WASHER,STEEL	
485	XYE3+EJ10	SCREW W/WASHER,STEEL	
728	LUS63008A	HEAT SINK (A)	
741	LSJA0343	AC CORD W/PLUG,120V	Δ
741	LSJA0364	AC CORD W/PLUG,120V	Δ
751	LML69001A	ANODE LEAD CLAMPER	
760	TUC77628	HEAT SINK	
765	LSSC0254	VERTICAL HEAT SINK (B,C)	
771	EYF52BC	FUSE HOLDER	
794	TUC15776	HEAT SINK (B,C)	
797	LSSC0562	HEAT SINK	

12.3.5. CRT C.B.A. (A)

COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-20DF62	Α
PV-27DF62	В
PV-27DF62-K	С

INTEGRATED CIRCUITS

Ref. No.	Part No.	Part Name & Description	Remarks
IC351	TDA6103Q	IC, LINEAR	

DIODES

Ref. No.	Part No.	Part Name & Description	Remarks
D352	B0AAGP000004	DIODE SI	
D353	B0AAGP000004	DIODE SI	
D354	B0AAGP000004	DIODE SI	

RESISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
R354	ERD25TJ272	CARBON 1/4W 2.7K	
R355	ERD25TJ272	CARBON 1/4W 2.7K	
R356	ERD25TJ272	CARBON 1/4W 2.7K	
R357	ERG1SJ104P	METAL OXIDE 1W 100K	
R359	ERG1SJ104P	METAL OXIDE 1W 100K	
R361	ERG1SJ104P	METAL OXIDE 1W 100K	
R363	ERDS2TJ102	CARBON 1/4W 1K	
R364	ERDS2TJ102	CARBON 1/4W 1K	
R365	ERDS2TJ102	CARBON 1/4W 1K	
R366	ERDS2TJ102	CARBON 1/4W 1K	
R367	ERDS2TJ102	CARBON 1/4W 1K	
R368	ERDS2TJ102	CARBON 1/4W 1K	
R369	ERDS2TJ222	CARBON 1/4W 2.2K	
R370	ERDS2TJ222	CARBON 1/4W 2.2K	
R371	ERDS2TJ222	CARBON 1/4W 2.2K	
R372	ERDS2TJ222	CARBON 1/4W 2.2K	
R373	ERDS2TJ222	CARBON 1/4W 2.2K	
R374	ERDS2TJ222	CARBON 1/4W 2.2K	
R375	ERDS2TJ102	CARBON 1/4W 1K	
R376	ERDS2TJ473	CARBON 1/4W 47K	
R377	ERDS2TJ103	CARBON 1/4W 10K	
R378	ERDS2TJ104	CARBON 1/4W 100K	
R379	ERDS2TJ124	CARBON 1/4W 120K	
R380	ERDS2TJ472	CARBON 1/4W 4.7K	

CAPACITORS

Ref. No.	Part No.	Part Name & Description	Remarks
C354	F1B3D1020008	CERAMIC 2KV 1000PF	
C364	ECEA1HKAR22	ELECTROLYTIC 50V 0.22UF	
C365	ECEA1CKN100	ELECTROLYTIC 16V 10UF	
C366	ECA2EM4R7B	ELECTROLYTIC 250V 4.7UF	

PIN HEADERS

Ref. No.	Part No.	Part Name & Description	Remarks
P351	VJWS4MS520IC	CONNECTOR 4P	
P352	VJWS4NS400IC	PARALLEL CONNECTOR 4P	
P353	K3B10CA00040	CRT SOCKET	

MISCELLANEOUS

Ref. No.	Part No.	Part Name & Description	Remarks
272	TMM77412	CLAMPER	
488	XYN3+F6S	SCREW W/WASHER,STEEL	
762	TUC76649-4	HEAT SINK	

12.3.6. CRT C.B.A. (B,C)

COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-20DF62	Α
PV-27DF62	В
PV-27DF62-K	С

INTEGRATED CIRCUITS

Ref. No.	Part No.	Part Name & Description	Remarks
IC351	TDA6103Q	IC, LINEAR	

TRANSISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
Q5051	2SC3311AIRTA	TRANSISTOR SI NPN	
Q5051	2SC3311AISTA	TRANSISTOR SI NPN	
Q5051	2SC3311ARA	TRANSISTOR SI NPN	
Q5051	2SC3311ASA	TRANSISTOR SI NPN	
Q5052	2SC3311AIRTA	TRANSISTOR SI NPN	
Q5052	2SC3311AISTA	TRANSISTOR SI NPN	
Q5052	2SC3311ARA	TRANSISTOR SI NPN	
Q5052	2SC3311ASA	TRANSISTOR SI NPN	
Q5053	B1AAGD000011	TRANSISTOR SI NPN CHIP	
Q5054	2SB1030ARA	TRANSISTOR SI PNP	
Q5055	2SB1569A-F51	TRANSISTOR SI PNP	
Q5056	B1BABL000019	TRANSISTOR SI NPN	
Q5057	2SA1309AIRTA	TRANSISTOR SI PNP	
Q5057	2SA1309AISTA	TRANSISTOR SI PNP	
Q5057	2SA1309ARA	TRANSISTOR SI PNP	
Q5057	2SA1309ASA	TRANSISTOR SI PNP	
Q5058	2SC3311AIRTA	TRANSISTOR SI NPN	
Q5058	2SC3311AISTA	TRANSISTOR SI NPN	
Q5058	2SC3311ARA	TRANSISTOR SI NPN	
Q5058	2SC3311ASA	TRANSISTOR SI NPN	
Q5061	2SC3311AIRTA	TRANSISTOR SI NPN	
Q5061	2SC3311AISTA	TRANSISTOR SI NPN	
Q5061	2SC3311ARA	TRANSISTOR SI NPN	
Q5061	2SC3311ASA	TRANSISTOR SI NPN	
Q5062	2SC3311AIRTA	TRANSISTOR SI NPN	
Q5062	2SC3311AISTA	TRANSISTOR SI NPN	
Q5062	2SC3311ARA	TRANSISTOR SI NPN	
Q5062	2SC3311ASA	TRANSISTOR SI NPN	

DIODES

Ref. No.	Part No.	Part Name & Description	Remarks
D352	B0AAGP000004	DIODE SI	
D353	B0AAGP000004	DIODE SI	
D354	B0AAGP000004	DIODE SI	

RESISTORS

	5		
Ref. No.		Part Name & Description	Remarks
R351	ERG1SJW104E	METAL OXIDE 1W 100K	
R352	ERG1SJW104E	METAL OXIDE 1W 100K	
R353	ERG1SJW104E	METAL OXIDE 1W 100K	
R354	ERD25TJ102T	CARBON 1/4W 1K	
R355	ERD25TJ102T	CARBON 1/4W 1K	
R356	ERD25TJ102T	CARBON 1/4W 1K	
R363	ERDS2TJ821	CARBON 1/4W 820	
R364	ERDS2TJ102	CARBON 1/4W 1K	
R365	ERDS2TJ821	CARBON 1/4W 820	
R366	ERDS2TJ102	CARBON 1/4W 1K	
R367	ERDS2TJ821	CARBON 1/4W 820	
R368	ERDS2TJ102	CARBON 1/4W 1K	
R369	ERDS2TJ102	CARBON 1/4W 1K	
R371	ERDS2TJ102	CARBON 1/4W 1K	
R373	ERDS2TJ102	CARBON 1/4W 1K	
R375	ERDS2TJ102	CARBON 1/4W 1K	
R376	ERDS2TJ473	CARBON 1/4W 47K	
R377	ERDS2TJ103	CARBON 1/4W 10K	
R378	ERDS2TJ104	CARBON 1/4W 100K	
R379	ERDS2TJ124	CARBON 1/4W 120K	
R380	ERDS2TJ472	CARBON 1/4W 4.7K	
R385	ERQ12AJ121E	FUSE 1/2W 120	Δ
11000			7:7
R386	ERDS2TJ331	CARBON 1/4W 330	
R387	ERDS2TJ331	CARBON 1/4W 330	
R388	ERDS2TJ331	CARBON 1/4W 330	
R5051	ERDS2TJ821	CARBON 1/4W 820	
R5052	ERDS2TJ223	CARBON 1/4W 22K	
R5053	ERDS2TJ332	CARBON 1/4W 3.3K	
R5054	ERDS2TJ431T	CARBON 1/4W 430	
R5056	ERDS2TJ510T	CARBON 1/4W 51	
R5058	ERDS2TJ391	CARBON 1/4W 390	
R5059	ERDS2TJ101	CARBON 1/4W 100	
R5060	ERG12SJW100E	METAL OXIDE 1/2W 10	
R5061	ERQ1ABJP331S	FUSE 1W 330	Δ
R5062	ERDS2TJ330T	CARBON 1/4W 33	
R5063	ERDS2TJ330T	CARBON 1/4W 33	
R5064	ERDS2TJ471	CARBON 1/4W 470	
R5065	ERDS2TJ563T	CARBON 1/4W 56K	
R5066	ERG12SJW471E	METAL OXIDE 1/2W 470	
R5067	ERDS2TJ563T	CARBON 1/4W 56K	
R5068	ERDS2TJ471	CARBON 1/4W 470	
R5069	ERDS2TJ390T	CARBON 1/4W 39	
R5070	ERDS2TJ2R7T	CARBON 1/4W 2.7	
R5071	ERDS2TJ2R7T	CARBON 1/4W 2.7	
R5072	ERDS2TJ390T	CARBON 1/4W 39	
R5073	ERDS2TJ101	CARBON 1/4W 100	
.10070		5, 5 5 14 1/411 100	

Ref. No.	Part No.	Part Name & Description	Remarks
R5074	ERDS2TJ333T	CARBON 1/4W 33K	
R5075	ERDS2TJ101	CARBON 1/4W 100	
R5076	ERDS2TJ101	CARBON 1/4W 100	
R5077	ERDS2TJ561	CARBON 1/4W 560	
R5078	ERDS2TJ101	CARBON 1/4W 100	
R5079	ERDS2TJ472	CARBON 1/4W 4.7K	
R5080	ERDS2TJ331	CARBON 1/4W 330	
R5081	ERDS2TJ682T	CARBON 1/4W 6.8K	
R5082	ERDS2TJ471	CARBON 1/4W 470	
R5083	ERDS2TJ471	CARBON 1/4W 470	

CAPACITORS

Ref. No.	Part No.	Part Name & Description	Remarks
C354	ECKC3D332KBP	CERAMIC 2KV 3300P	
C364	ECEA1HKAR22	ELECTROLYTIC 50V 0.22UF	
C365	ECEA1CKN100	ELECTROLYTIC 16V 10UF	
C366	ECA2EM4R7B	ELECTROLYTIC 250V 4.7UF	
C5051	ECKR1H103ZF5	CERAMIC 50V 0.01UF	
C5052	ECA1HM100B	ELECTROLYTIC 50V 10UF	
C5053	ECKR1H103ZF5	CERAMIC 50V 0.01UF	
C5058	ECA2CM470E	ELECTROLYTIC 160V 47UF	
C5059	ECKR2H103ZU	CERAMIC 500V 0.01UF	
C5060	ECKR2H151KB5	CERAMIC 500V 150PF	
C5061	ECA2AM100B	ELECTROLYTIC 100V 10UF	
C5062	ECKR1H103ZF5	CERAMIC 50V 0.01UF	
C5063	ECKR1H151KB5	CERAMIC 50V 150PF	
C5064	ECA1CHG101B	ELECTROLYTIC 16V 100UF	
C5065	ECA1CHG101B	ELECTROLYTIC 16V 100UF	
C5066	ECA1CM221B	ELECTROLYTIC 16V 220UF	
C5068	ECKR1H103ZF5	CERAMIC 50V 0.01UF	
C5069	ECKR1H103ZF5	CERAMIC 50V 0.01UF	

COILS

Ref. No.	Part No.	Part Name & Description	Remarks
L5051	G0ZZ00001933	COIL	
L5053	G0ZZ00001933	COIL	
L5054	G0ZZ00001933	COIL	
L5055	G0ZZ00001933	COIL	

PIN HEADERS

Ref. No.	Part No.	Part Name & Description	Remarks
P351	K1KA06A00220	CONNECTOR 6P	
P352	VEKS5757	CONNECTOR CABLE W/PLUG,DC 220V	
P353	LJP25004A	CRT SOCKET	
P369	K1KA03B00107	CONNECTOR 3P	
P5051	K1KA02A00188	CONNECTOR 2P	

MISCELLANEOUS

Ref. No.	Part No.	Part Name & Description	Remarks
488	XYN3+F6S	SCREW W/WASHER,STEEL	
489	XYN3+F8S	SCREW W/WASHER,STEEL	
761	TUC15717	HEAT SINK	
762	TUC76649-4	HEAT SINK	
798	TMM7464-1R	CLAMPER	

12.3.7. DVD DECODER C.B.A.

INTEGRATED CIRCUITS

Ref. No.	Part No.	Part Name & Description	Remarks
IC8000	ES4318F	IC, 32BIT MICROCONTROLLER	E.S.D.
IC8001	AT24C04N10SI	IC, 4K EEP ROM	E.S.D.
IC8001	C3EBEC000031	IC, 4K EEP ROM	E.S.D.
IC8001	S-24C04A	IC, 4K EEP ROM	E.S.D.
IC8002	C0JBAF000480	IC, CMOS STANDARD LOGIC	E.S.D.
IC8002	SN74AHCT374N	IC, CMOS STANDARD LOGIC	E.S.D.
IC8003	C0DBZGG00002	IC, LINEAR	
IC8100	C3ABPG000078	IC, 64MBIT SD RAM	E.S.D.
IC8100	C3ABPG000067	IC, 64MBIT SD RAM	E.S.D.
IC8100	C3ABPG000102	IC, 64MBIT SD RAM	E.S.D.
IC8200	ADV7170KSU	IC, LINEAR	
IC8201	C0CBABD00016	IC, LINEAR	
IC8301	C3FBLD000084	IC, 8MBIT FLASH MEMORY	E.S.D.
IC8301	C3FBLG000012	IC, 8MBIT FLASH MEMORY	E.S.D.
IC8401	AN6552S-E1	IC, LINEAR	
IC8403	PCM1723E-2K	IC, LINEAR	
IC8502	C0JBAB000196	IC, CMOS STANDARD LOGIC	E.S.D.

TRANSISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
Q8000	2SB09560RL	TRANSISTOR SI PNP CHIP	
Q8200	2SB1218ARL	TRANSISTOR SI PNP CHIP	
Q8201	2SB1218ARL	TRANSISTOR SI PNP CHIP	
Q8202	2SB1218ARL	TRANSISTOR SI PNP CHIP	
Q8204	2SB1218ARL	TRANSISTOR SI PNP CHIP	
Q8205	2SB1218ARL	TRANSISTOR SI PNP CHIP	
Q8206	2SB1218ARL	TRANSISTOR SI PNP CHIP	

DIODES

Ref. No.	Part No.	Part Name & Description	Remarks
D8000	MAZ30510ML	DIODE ZENER 5.1V	
D8001	MAZ30510ML	DIODE ZENER 5.1V	
D8002	MAZ30510ML	DIODE ZENER 5.1V	
D8003	MAZ30510ML	DIODE ZENER 5.1V	

RESISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
R8004	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R8010	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R8011	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R8012	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R8013	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R8014	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R8015	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R8016	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R8017	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R8018	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R8019	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R8020	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R8021	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R8022	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R8023	ERJ3GEYJ470V	MGF CHIP 1/16W 47	
R8024	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R8025	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R8026	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R8027	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R8028	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R8029	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R8030	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R8031	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R8032	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R8033	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R8034	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R8035	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R8036	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R8037	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R8038	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R8039	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R8040	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R8041	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R8042	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R8043	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R8045	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R8047	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R8048	ERJ3GEYJ470V	MGF CHIP 1/16W 47	
R8049	ERJ1WYJ1R0U	MGF CHIP 1W 1	
R8050	ERJ3GEYJ820V	MGF CHIP 1/16W 82	
R8051	ERJ3GEYJ820V	MGF CHIP 1/16W 82	
R8052	ERJ3GEYJ820V	MGF CHIP 1/16W 82	
R8053	ERJ3GEYJ820V	MGF CHIP 1/16W 82	
R8054	ERJ3GEYJ820V	MGF CHIP 1/16W 82	
R8055	ERJ3GEYJ820V	MGF CHIP 1/16W 82	
R8056	ERJ3GEYJ820V	MGF CHIP 1/16W 82	
R8057	ERJ3GEYJ820V	MGF CHIP 1/16W 82	
R8058	ERJ3GEYJ470V	MGF CHIP 1/16W 47	
R8059	ERJ3GEYJ470V	MGF CHIP 1/16W 47	
R8060	ERJ3GEYJ470V	MGF CHIP 1/16W 47	
R8061	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R8062	ERJ3GEYJ470V	MGF CHIP 1/16W 47	
R8063	ERJ3GEYJ470V	MGF CHIP 1/16W 47	
R8064	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	

Ref. No.	Part No.	Part Name & Description	Remarks
R8065	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R8066	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R8067	ERJ3GEYJ470V	MGF CHIP 1/16W 47	
R8068	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R8069	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R8074	ERJ3GEYJ470V	MGF CHIP 1/16W 47	
R8076	ERJ3GEY0R00V		_
R8077	ERJ3GEY0R00V		_
R8082	ERJ3GEYJ220V	MGF CHIP 1/16W 22	_
R8083	ERJ3GEYJ220V	MGF CHIP 1/16W 22	_
R8084	ERJ3GEYJ220V	MGF CHIP 1/16W 22	_
R8085	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R8086	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R8087	ERJ3GEYJ220V	MGF CHIP 1/16W 22	+
R8088	ERJ3GEYJ220V	MGF CHIP 1/16W 22	+
R8089	ERJ3GEYJ220V	MGF CHIP 1/16W 22	+
R8090	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R8091	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R8092	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R8093	ERJ3GEYJ220V	MGF CHIP 1/16W 22	_
R8094	ERJ3GEYJ220V	MGF CHIP 1/16W 22	_
R8095	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R8096	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R8097	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R8098	ERJ3GEYJ220V	MGF CHIP 1/16W 22	_
R8099	ERJ3GEYJ220V	MGF CHIP 1/16W 22	_
R8101	ERJ3GEYJ100V	MGF CHIP 1/16W 10	
R8102	ERJ3GEYJ100V	MGF CHIP 1/16W 10	_
R8103	ERJ3GEYJ100V	MGF CHIP 1/16W 10	_
R8104	ERJ3GEYJ100V	MGF CHIP 1/16W 10	
R8105	ERJ3GEYJ100V	MGF CHIP 1/16W 10	_
R8106	ERJ3GEYJ100V	MGF CHIP 1/16W 10	_
R8107	ERJ3GEYJ100V	MGF CHIP 1/16W 10	_
R8108	ERJ3GEYJ100V	MGF CHIP 1/16W 10	_
R8109	ERJ3GEYJ100V	MGF CHIP 1/16W 10	_
R8110		MGF CHIP 1/16W 10	
R8111		MGF CHIP 1/16W 10	
R8113		MGF CHIP 1/16W 33	
R8115		MGF CHIP 1/16W 33	+
R8116		MGF CHIP 1/16W 33	+
		MGF CHIP 1/16W 33	
R8117			+
R8118		MGF CHIP 1/16W 33 MGF CHIP 1/16W 0	+
R8119			
R8120		MGF CHIP 1/16W 0	
R8123		MGF CHIP 1/16W 0	+
R8124		MGF CHIP 1/16W 0	+
R8125		MGF CHIP 1/16W 0	+
R8137		MGF CHIP 1/16W 10	
R8143		MGF CHIP 1/16W 10	
R8144		MGF CHIP 1/16W 10	
R8145		MGF CHIP 1/16W 10	
R8146		MGF CHIP 1/16W 10	
R8147		MGF CHIP 1/16W 10	
R8148	ERJ3GEYJ100V	MGF CHIP 1/16W 10	

Ref. No.	Part No.	Part Name & Description	Remarks
R8149	ERJ3GEYJ100V	MGF CHIP 1/16W 10	
R8150	ERJ3GEYJ100V	MGF CHIP 1/16W 10	
R8151	ERJ3GEYJ100V	MGF CHIP 1/16W 10	
R8152	ERJ3GEYJ100V	MGF CHIP 1/16W 10	
R8153	ERJ3GEYJ100V	MGF CHIP 1/16W 10	
R8154	ERJ3GEYJ100V	MGF CHIP 1/16W 10	
R8155	ERJ3GEYJ100V	MGF CHIP 1/16W 10	
R8156	ERJ3GEYJ100V	MGF CHIP 1/16W 10	
R8157	ERJ3GEYJ100V	MGF CHIP 1/16W 10	
R8158	ERJ3GEYJ100V	MGF CHIP 1/16W 10	
R8203	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R8204	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R8205	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R8206	ERJ3GEYJ104V	MGF CHIP 1/16W 100K	
R8207	ERJ3GEYJ104V	MGF CHIP 1/16W 100K	
R8208	ERJ3GEYJ152V	MGF CHIP 1/16W 1.5K	
R8215	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R8216	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R8217	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R8218	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R8220	ERJ3GEYJ151V	MGF CHIP 1/16W 150	
R8221	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R8222	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R8223	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R8224	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R8225	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R8230	ERJ3GEYJ302V	MGF CHIP 1/16W 3K	
R8231	ERJ3GEYJ151V	MGF CHIP 1/16W 150	
R8232	ERJ3GEYJ302V	MGF CHIP 1/16W 3K	
R8233	ERJ3GEYJ151V	MGF CHIP 1/16W 150	
R8234	ERJ3GEYJ302V	MGF CHIP 1/16W 3K	
R8238	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R8239	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R8240	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R8241	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R8292	ERJ8GEYJ1R0V	MGF CHIP 1/8W 1	
R8293	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R8294	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R8299	EVM3YSX50B23	VARIABLE 2K	
R8300	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R8301	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R8302	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R8304	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R8309	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R8310	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R8311		MGF CHIP 1/16W 33	
R8312		MGF CHIP 1/16W 33	
R8313		MGF CHIP 1/16W 33	
R8314		MGF CHIP 1/16W 33	
R8315		MGF CHIP 1/16W 33	
R8316		MGF CHIP 1/16W 33	
R8317		MGF CHIP 1/16W 33	
R8318	ERJ3GEYJ330V		
-	ERJ3GEYJ330V		

Ref. No.	Part No.	Part Name & Description	Remarks
R8320	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R8321	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R8322	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R8323	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R8324	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R8326	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R8327	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R8328	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R8329	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R8330	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R8331	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R8332	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R8333	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R8334	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R8335	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R8336	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R8337	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R8338	ERJ3GEYJ621V	MGF CHIP 1/16W 620	
R8339	ERJ3GEYJ333V	MGF CHIP 1/16W 33K	
R8340	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R8341	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R8342	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R8343	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R8344	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R8345	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R8346	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R8347	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R8348	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R8349	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R8350	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R8351	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R8352	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R8353	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R8354	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R8355	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R8356		MGF CHIP 1/16W 22	
R8357		MGF CHIP 1/16W 22	
R8358		MGF CHIP 1/16W 22	
R8359		MGF CHIP 1/16W 22	
R8360		MGF CHIP 1/16W 22	
R8361		MGF CHIP 1/16W 22	
R8362		MGF CHIP 1/16W 22	
R8363		MGF CHIP 1/16W 22	
R8364		MGF CHIP 1/16W 22	
R8365		MGF CHIP 1/16W 22	
R8366		MGF CHIP 1/16W 22	
R8367		MGF CHIP 1/16W 22	
R8368		MGF CHIP 1/16W 22	
R8369		MGF CHIP 1/16W 22	
R8370		MGF CHIP 1/16W 22	+
R8371		MGF CHIP 1/16W 22	
R8372		MGF CHIP 1/16W 22	
		MGF CHIP 1/16W 22	_
R8373			

Ref. No.	Part No.	Part Name & Description	Remarks
R8375	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R8376	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R8377	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R8378	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R8379	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R8380	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R8381	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R8382	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R8383	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R8384	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R8385	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R8386	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R8387	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R8388	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R8389	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R8390	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R8391	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R8392	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R8393	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R8394	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R8395	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R8396	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R8397	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R8398	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R8403	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R8404	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R8405	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R8406	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R8407	ERJ3GEYJ822V	MGF CHIP 1/16W 8.2K	
R8408	ERJ3GEYJ822V	MGF CHIP 1/16W 8.2K	
R8409	ERJ3GEYJ622V	MGF CHIP 1/16W 6.2K	
R8410	ERJ3GEYJ622V	MGF CHIP 1/16W 6.2K	
R8411	ERJ3EKF1502V	MGF CHIP 1/16W 15K	
R8412	ERJ3EKF1502V	MGF CHIP 1/16W 15K	
R8413	ERJ3GEYJ471V	MGF CHIP 1/16W 470	
R8414	ERJ3GEYJ471V	MGF CHIP 1/16W 470	
R8427	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R8429	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R8430	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R8431	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R8432	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R8433	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R8434	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R8435	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R8447	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R8500	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R8501	ERJ3GEYJ331V	MGF CHIP 1/16W 330	
R8502	ERJ3GEYJ331V	MGF CHIP 1/16W 330	
R8503	ERJ3GEYJ331V	MGF CHIP 1/16W 330	
R8504	ERJ3GEYJ331V	MGF CHIP 1/16W 330	
R8505	ERJ3GEYJ151V	MGF CHIP 1/16W 150	
R8506	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R8507	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R8508	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	

Ref. No.	Part No.	Part Name & Description	Remarks
R8509	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R8510	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R8511	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R8512	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R8513	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R8514	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	

CAPACITORS

Ref. No.	Part No.	Part Name & Description	Remarks
C8000	ECJ1VF1C104Z	C CHIP 16V 0.1UF	
C8001	ECJ1VF1C104Z	C CHIP 16V 0.1UF	
C8002	ECJ1VF1C104Z	C CHIP 16V 0.1UF	
C8003	ECJ1VF1C104Z	C CHIP 16V 0.1UF	
C8004	ECJ1VF1C104Z	C CHIP 16V 0.1UF	
C8005	ECJ1VF1C104Z	C CHIP 16V 0.1UF	
C8006	ECJ1VF1C104Z	C CHIP 16V 0.1UF	
C8007	ECJ1VF1C104Z	C CHIP 16V 0.1UF	
C8008	ECJ1VF1C104Z	C CHIP 16V 0.1UF	
C8009	ECJ1VF1C104Z	C CHIP 16V 0.1UF	
C8010	ECJ1VF1C104Z	C CHIP 16V 0.1UF	
C8011	ECJ1VF1C104Z	C CHIP 16V 0.1UF	
C8012	ECJ1VF1C104Z	C CHIP 16V 0.1UF	
C8013	ECJ1VF1C104Z	C CHIP 16V 0.1UF	
C8014	ECJ1VF1C104Z	C CHIP 16V 0.1UF	
C8015	ECJ1VF1C104Z	C CHIP 16V 0.1UF	
C8016	ECJ1VF1C104Z	C CHIP 16V 0.1UF	
C8017	ECJ1VF1C104Z	C CHIP 16V 0.1UF	
C8018	ECJ1VF1C104Z	C CHIP 16V 0.1UF	
C8019	ECJ1VF1C104Z	C CHIP 16V 0.1UF	
C8020	ECJ1VF1C104Z	C CHIP 16V 0.1UF	
C8021	ECJ1VF1C104Z	C CHIP 16V 0.1UF	
C8022	ECJ1VF1C104Z	C CHIP 16V 0.1UF	
C8023	ECJ1VF1C104Z	C CHIP 16V 0.1UF	
C8025	ECJ2VC1H151J	C CHIP 50V 150PF	
C8026	ECEV1CS100S	ELECTROLYTIC CHIP 16V 10UF	
C8027	ECEV0JA101S	ELECTROLYTIC CHIP 6.3V 100UF	
C8030	ECJ1VF1C104Z	C CHIP 16V 0.1UF	
C8031	ECJ1VF1C104Z	C CHIP 16V 0.1UF	
C8034	ECEV0JA331	ELECTROLYTIC CHIP 6.3V 330UF	
C8041	ECJ1VF1C104Z	C CHIP 16V 0.1UF	
C8042	ECEV1AA470WR	ELECTROLYTIC CHIP 10V 47UF	
C8043	ECEV1AA101SP	ELECTROLYTIC CHIP 10V 100UF	
C8044	ECEV1AA101SP	ELECTROLYTIC CHIP 10V 100UF	
C8045	ECJ1VF1C104Z	C CHIP 16V 0.1UF	
C8047	ECJ1VF1C104Z	C CHIP 16V 0.1UF	
C8048	ECEV1CS100S	ELECTROLYTIC CHIP 16V 10UF	
C8049	ECEV1AA470WR	ELECTROLYTIC CHIP 10V 47UF	
C8050	ECEV0JA101S	ELECTROLYTIC CHIP 6.3V 100UF	
C8054	ECEV1AA101SP	ELECTROLYTIC CHIP 10V 100UF	
C8056	ECEV0JA470S	ELECTROLYTIC CHIP 6.3V 47UF	
C8058	ECJ1VF1C104Z	C CHIP 16V 0.1UF	
C8102	ECUE1C104ZFV	C CHIP 16V 0.1UF	
C8106	ECJ1VF1C104Z	C CHIP 16V 0.1UF	

Ref. No.	Part No.	Part Name & Description	Remarks
C8107	ECJ1VF1C104Z	C CHIP 16V 0.1UF	
C8109	ECJ1VF1C104Z	C CHIP 16V 0.1UF	
C8110	ECJ1VF1C104Z	C CHIP 16V 0.1UF	
C8111	ECJ1VF1C104Z	C CHIP 16V 0.1UF	
C8112	ECJ1VF1C104Z	C CHIP 16V 0.1UF	
C8201	ECJ1VF1C104Z	C CHIP 16V 0.1UF	+
C8202	ECJ1VF1C104Z	C CHIP 16V 0.1UF	+
C8203	ECJ1VF1C104Z	C CHIP 16V 0.1UF	+
C8206	ECJ1VF1C104Z	C CHIP 16V 0.1UF	+
C8207	ECJ1VF1C104Z	C CHIP 16V 0.1UF	+
C8208	ECJ1VF1C104Z	C CHIP 16V 0.1UF	
C8209	ECEV1CS100S	ELECTROLYTIC CHIP 16V 10UF	+
C8210	ECJ1VF1C104Z	C CHIP 16V 0.1UF	
C8211	ECEVOJA101S	ELECTROLYTIC CHIP 6.3V 100UF	
C8215	ECEV0JA470S	ELECTROLYTIC CHIP 6.3V 47UF	
C8219	ECJ1VF1C104Z	C CHIP 16V 0.1UF	
C8220	ECJ1VF1C104Z	C CHIP 16V 0.1UF	
C8221	ECJ1VF1C104Z	C CHIP 16V 0.1UF	
C8222	ECJ1VF1C104Z	C CHIP 16V 0.1UF	
C8223	ECJ1VF1C104Z	C CHIP 16V 0.1UF	1
C8224	ECJ1VF1C104Z	C CHIP 16V 0.1UF	
C8225	ECEV1CS100S	ELECTROLYTIC CHIP 16V 10UF	
C8226	ECJ1VF1C104Z	C CHIP 16V 0.1UF	
C8227		ELECTROLYTIC CHIP 10V 47UF	
C8228	ECJ1VC1H390J	C CHIP 50V 39PF	
C8229	ECJ1VC1H390J	C CHIP 50V 39PF	
C8230	ECJ1VC1H220J	C CHIP 50V 22PF	
C8231	ECJ1VC1H390J	C CHIP 50V 39PF	
C8232	ECJ1VC1H390J	C CHIP 50V 39PF	
C8233	ECJ1VC1H220J ECJ1VC1H390J	C CHIP 50V 22PF	
C8234		C CHIP 50V 39PF C CHIP 50V 39PF	
C8235	ECJ1VC1H390J		1
C8236	ECJ1VC1H220J	C CHIP 50V 22PF	
C8238	ECJ1VC1H220J	C CHIP 50V 22PF	
C8239	ECJ1VC1H220J	C CHIP 50V 22PF	
C8240		C CHIP 50V 22PF	
C8241	ECEVOJA470S	ELECTROLYTIC CHIP 6.3V 47UF	
C8243		C CHIP 50V 0.01UF	
C8244		C CHIP 50V 0.01UF	
C8245		C CHIP 50V 0.01UF	
C8246		C CHIP 50V 0.01UF	
C8247		C CHIP 50V 0.01UF	-
C8248		C CHIP 50V 0.01UF	-
C8249		C CHIP 50V 0.01UF	
C8250		C CHIP 50V 0.01UF	
C8251		C CHIP 50V 0.01UF	-
C8252		C CHIP 50V 0.01UF	
C8253		C CHIP 50V 0.01UF	-
C8301	ECJ1VF1C104Z	C CHIP 16V 0.1UF	-
C8302	ECJ1VF1A105Z	C CHIP 10V 1UF	
C8303	ECJ1VF1C104Z	C CHIP 16V 0.1UF	
C8403	ECEV1CS100S	ELECTROLYTIC CHIP 16V 10UF	
C8404	ECEV1CA101	ELECTROLYTIC CHIP 16V 100UF	
C8405	ECEV1CS100S	ELECTROLYTIC CHIP 16V 10UF	

Ref. No.	Part No.	Part Name & Description	Remarks
C8406	ECJ1VF1C104Z	C CHIP 16V 0.1UF	
C8407	ECEV1EA330SP	ELECTROLYTIC CHIP 25V 33UF	
C8408	ECEV1EA330SP	ELECTROLYTIC CHIP 25V 33UF	
C8409	ECJ1VC1H101J	C CHIP 50V 100PF	
C8410	ECJ1VC1H101J	C CHIP 50V 100PF	
C8411	ECJ1VB1H102K	C CHIP 50V 1000PF	
C8412	ECJ1VB1H102K	C CHIP 50V 1000PF	
C8414	ECJ1VB1H472K	C CHIP 50V 4700PF	
C8416	ECJ1VB1H472K	C CHIP 50V 4700PF	
C8421	ECJ1VC1H330J	C CHIP 50V 33PF	
C8425	ECEV1CA100S	ELECTROLYTIC CHIP 16V 10UF	
C8426	ECEV1CA100S	ELECTROLYTIC CHIP 16V 10UF	
C8429	ECEV1CS100S	ELECTROLYTIC CHIP 16V 10UF	
C8430	ECEV1CS100S	ELECTROLYTIC CHIP 16V 10UF	
C8431	ECEV1CS100S	ELECTROLYTIC CHIP 16V 10UF	
C8432	ECEV1CS100S	ELECTROLYTIC CHIP 16V 10UF	
C8438	ECJ1VF1C104Z	C CHIP 16V 0.1UF	
C8439	ECJ1VF1C104Z	C CHIP 16V 0.1UF	
C8440	ECJ1VF1C104Z	C CHIP 16V 0.1UF	
C8442	ECEV1AA470WR	ELECTROLYTIC CHIP 10V 47UF	
C8443	ECJ1VF1C104Z	C CHIP 16V 0.1UF	
C8507	ECJ1VC1H330J	C CHIP 50V 33PF	
C8508	ECJ1VC1H330J	C CHIP 50V 33PF	
C8509	ECJ1VC1H330J	C CHIP 50V 33PF	
C8510	ECJ1VC1H330J	C CHIP 50V 33PF	
C8511	ECJ1VC1H330J	C CHIP 50V 33PF	
C8513	ECJ1VF1C104Z	C CHIP 16V 0.1UF	
C8514	ECJ1VF1C104Z	C CHIP 16V 0.1UF	

FILTERS

Ref. No.	Part No.	Part Name & Description	Remarks
FL8000	LSLF0014	EMI FILTER CHIP	
FL8001	LSLF0014	EMI FILTER CHIP	
FL8002	LSLF0014	EMI FILTER CHIP	
FL8003	LSLF0014	EMI FILTER CHIP	
FL8200	LSLF0014	EMI FILTER CHIP	

COILS

Ref. No.	Part No.	Part Name & Description	Remarks
L8000	J0JHC0000027	EMI FILTER CHIP	
L8002	J0JBC0000010	EMI FILTER CHIP	
L8003	J0JBC0000010	EMI FILTER CHIP	
L8004	J0JBC0000010	EMI FILTER CHIP	
L8005	J0JBC0000010	EMI FILTER CHIP	
L8006	J0JBC0000010	EMI FILTER CHIP	
L8007	J0JBC0000010	EMI FILTER CHIP	
L8009	LSLF0008	LOW PASS FILTER	
L8010	LSLF0008	LOW PASS FILTER	
L8011	J0JGC0000017	EMI FILTER CHIP	
L8012	J0JGC0000017	EMI FILTER CHIP	
L8013	J0JGC0000017	EMI FILTER CHIP	
L8017	LSLF0006	LOW PASS FILTER	
L8018	J0JBC0000010	EMI FILTER CHIP	
		EMI FILTER CHIP	
L8020	J0JBC0000010 J0JCC0000117	EMI FILTER CHIP	
L8021 L8022			
	J0JHC0000027	EMI FILTER CHIP	
L8023	LSLF0015	EMI FILTER CHIP	
L8102	LSLF0015	EMI FILTER CHIP	
L8200	LSLF0015	EMI FILTER CHIP	
L8204	J0JBC0000010	EMI FILTER CHIP	
L8205	J0JBC0000010	EMI FILTER CHIP	
L8206	J0JBC0000010	EMI FILTER CHIP	
L8207	J0JHC0000027	EMI FILTER CHIP	
L8210	LSLF0006	LOW PASS FILTER	
L8212		INDUCTOR CHIP	
L8213		INDUCTOR CHIP	
L8214		INDUCTOR CHIP	
L8215		INDUCTOR CHIP	
L8216		INDUCTOR CHIP	
L8217	G1C270MA0021	INDUCTOR CHIP	
L8218		INDUCTOR CHIP	
L8219	G1C330MA0021	INDUCTOR CHIP	
L8220	G1C270MA0021	INDUCTOR CHIP	
L8222	LSLF0015	EMI FILTER CHIP	
L8223	LSLF0015	EMI FILTER CHIP	
L8301	LSLF0006	LOW PASS FILTER	
L8400	J0JBC0000010	EMI FILTER CHIP	
L8401	J0JBC0000010	EMI FILTER CHIP	
L8402	LSLF0032	EMI FILTER CHIP	
L8410	J0JBC0000010	EMI FILTER CHIP	
L8411	J0JBC0000010	EMI FILTER CHIP	
L8416	LSLF0006	LOW PASS FILTER	
L8501	LSLF0006	LOW PASS FILTER	
L8506	G1C1R0K00005	INDUCTOR CHIP	
L8507	G1C1R0K00005	INDUCTOR CHIP	
L8508	G1C1R0K00005	INDUCTOR CHIP	
L8511	LSLF0015	EMI FILTER CHIP	
L8512	G1C1R0K00005	INDUCTOR CHIP	
L8513	G1C1R0K00005	INDUCTOR CHIP	

Ref. No.	Part No.	Part Name & Description	Remarks
X8501	VSXS0240	CRYSTAL OSCILLATOR	

PIN HEADERS

Ref. No.	Part No.	Part Name & Description	Remarks
P8001	VJPS0771	CONNECTOR PLUG 13P	
P8002	VJPS0771	CONNECTOR PLUG 13P	
P8003	VJPS0771	CONNECTOR PLUG 13P	
P8004	LSJS0040	CONNECTOR 40P	

MISCELLANEOUS

Ref. No.	Part No.	Part Name & Description	Remarks
737	VEKS5836	CONNECTOR CABLE W/PLUG,0V	
791	VEKS5773	CONNECTOR CABLE W/PLUG,DC 5V	
795	LSEK0453	GROUNDING WIRE	

13. SCHEMATIC DIAGRAMS FOR PRINTING WITH LETTER SIZE